The results show that immunostimulation can be suppressed by suitable chemical modifications without losing siRNA potency by introducing seemingly minor structural changes.

CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 1, 13, 15

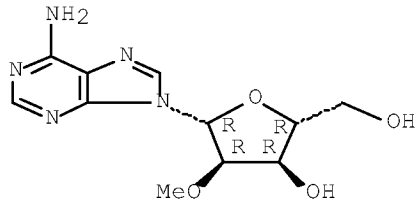
IT Human
Immunostimulation
Mononuclear leukocyte
RNA interference
(chemical modifications in small interfering RNA that sep. immunostimulation from RNA interference, affecting IFN production/secretion or gene-silencing activity in human PBMC)

IT 50-89-5, Thymidine, biological studies 951-78-0, 2'-Deoxyuridine
2140-79-6, 2'-O-Methyladenosine
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(chemical modifications in small interfering RNA that sep. immunostimulation from RNA interference, affecting IFN production/secretion or gene-silencing activity in human PBMC)

IT 2140-79-6, 2'-O-Methyladenosine
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(chemical modifications in small interfering RNA that sep. immunostimulation from RNA interference, affecting IFN production/secretion or gene-silencing activity in human PBMC)

RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:99157 HCAPLUS Full-text
DOCUMENT NUMBER: 142:170033
TITLE: Methods and compositions for the treatment or prevention of human immunodeficiency virus and related conditions using cyclooxygenase-2 selective inhibitors and antiviral agents
INVENTOR(S): Maziasz, Timothy
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 172 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 20050026902	A1	20050203	US 2004-769485		20040130
PRIORITY APPLN. INFO.:			US 2003-443910P	P	20030131
OTHER SOURCE(S):	MARPAT 142:170033				

AB The present invention provides compns. and methods for the treatment of human immunodeficiency virus (HIV) infection as well as HIV associated diseases and related disorders. More particularly, the invention provides a combination therapy for the treatment of HIV infection as well as HIV associated diseases and related disorders comprising the administration to a subject of an anti-human immunodeficiency virus agent in combination with a cyclooxygenase-2 selective inhibitor or an isomer or a pharmaceutically acceptable salt, ester, or prodrug thereof.

IC ICM A61K031-55
ICS A61K031-54

INCL 514217000; 514226500

CC 1-5 (Pharmacology)

IT AIDS (disease)
Anti-AIDS agents
Combination chemotherapy
Diarrhea
Drug delivery systems
Fever and Hyperthermia
Gene therapy
Hepatitis
Human
Human immunodeficiency virus
Immunostimulation
Lymphoma
Seizures
(methods and compns. for treatment or prevention of HIV infection and related conditions using cyclooxygenase-2 selective inhibitors and antiviral agents)

IT 98-10-2D, Benzenesulfonamide, analogs and compds. 103-82-2D, Phenylacetic acid, derivs. 127-07-1, Hydroxyurea 129-46-4 254-04-6D, 2H-1-Benzopyran, compds. 254-04-6D, Benzopyran, compds. and analogs 2054-35-5D, analogs 3056-17-5 3112-85-4D, Methylsulfonylbenzene, analogs and compds. 3416-05-5, 3'-Deoxythymidine 4097-22-7, 2',3'-Dideoxyadenosine 4431-00-9, Aurintricarboxylic acid 7057-48-9 7481-88-1 7481-89-2, 2',3'-Dideoxycytidine 14665-52-2, Bis(2-nitrophenyl)sulfone 25526-93-6, 3'-Fluoro-3'-deoxythymidine 29828-28-2D, Dihydronaphthalene, analogs 29968-14-7D, Dihydroquinoline, analogs 30516-87-1, 3'-Azido-3'-deoxythymidine 30516-87-1D, 3'-Azido-3'-deoxythymidine, 5'alkylglycoside carbonates 31515-43-2, 2-Nitrophenyl phenyl sulfone 36791-04-5 41107-56-6, 3'-Fluoro-2',3'-dideoxyuridine 51246-79-8, 3'-Fluoro-2',3'-dideoxycytidine 51803-78-2 53766-80-6, 2',3'-Didehydro-2',3'-dideoxyguanosine 63585-09-1, Phosphonoformic acid trisodium salt 64224-21-1 66323-44-2 66323-46-4, 3'-Azido-2',3'-dideoxyguanosine 69655-05-6, 2',3'-Dideoxyinosine 71125-38-7 78794-60-2 79872-72-3 80937-31-1 84472-85-5, 3'-Azido-2',3'-dideoxyuridine 84472-89-9, 3'-Azido-2',3'-dideoxycytidine 85236-92-6, 3'-Azido-2',3'-dideoxy-5-iodouridine 85326-06-3, 2',3'-Dideoxyguanosine 85326-07-4, 6-Methyl-2',3'-dideoxyadenosine 87190-74-7, 3'-Azido-2',3'-dideoxy-5-fluorouridine 87190-79-2 87190-80-5 87190-84-9 87418-35-7 92562-88-4, 3'-Fluoro-2',3'-dideoxyguanosine 93014-16-5, 4-(2-Methyl-4-phenyl-5-oxazolyl)benzenesulfonamide 105380-83-4, 3'-Azido-2',3'-dideoxy-5-ethyluridine 105784-82-5,

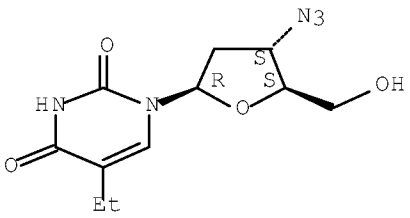
3'-Azido-2',3'-dideoxy-5-bromouridine 106060-85-9 107036-62-4, 5-Fluoro-2',3'-dideoxycytidine 107550-73-2 108441-50-5 108441-51-6, 3'-Azido-5-chloro-2',3'-dideoxyuridine 108895-46-1 109881-25-6 110142-99-9 110143-10-7 111495-90-0 111495-95-5 111495-96-6 111495-98-8 111496-01-6 114551-78-9 114753-53-6 115249-86-0, 2',3'-Dideoxy-3'-fluoro-5-bromouridine 115913-79-6 116333-41-6 119555-47-4 119644-22-3, 2',3'-Dideoxy-3'-fluoro-5-chlorouridine 119644-23-4 120443-30-3 120503-30-2, 6-Dimethylaminopurine-2',3'-dideoxyriboside 120503-34-6 120503-35-7, N-Ethyl-2',3'-dideoxyadenosine 120826-45-1 121117-72-4 121135-52-2 121135-53-3 121353-93-3 123027-56-5 123663-49-0 124770-85-0 124903-20-4 125056-58-8 126062-18-8 126320-77-2 126347-69-1 127245-22-1 127492-31-3 127492-32-4 129618-40-2 130108-72-4 130108-73-5, 4'-Azido-2'-deoxyadenosine 130108-74-6, 4'-Azido-2'-deoxyguanosine 130108-75-7, 4'-Azido-2'-deoxyuridine 130108-76-8, 4'-Azido-2'-deoxycytidine 130108-77-9, 4'-Azido-2'-deoxyinosine 130108-82-6, 4'-Azido-3'-deoxythymidine 130797-04-5 131293-25-9 131613-15-5 132235-73-5 132774-45-9 132796-66-8 132796-67-9 132796-68-0 132970-02-6 134379-77-4 134678-17-4, Epivir 135212-57-6 135525-66-5 135525-77-8 135560-41-7 135812-04-3 135812-34-9 136160-29-7 136160-30-0 136470-78-5, Ziagen 136816-75-6 136816-76-7 136816-96-1 136817-66-8 136891-12-8 137332-54-8 137945-48-3 138192-33-3 138226-12-7 139226-28-1 139418-97-6, 4'-Azido-5-chloro-2'-deoxyuridine 139888-11-2, 4'-Cyanothymidine 141030-34-4 141030-55-9 141781-17-1 142102-79-2 143390-74-3 143491-57-0 143809-38-5 143809-39-6 144239-69-0 144433-06-7 145417-33-0 145514-01-8 145986-26-1 146739-86-8 147058-39-7 147362-57-0 147440-15-1 147584-54-1 147920-12-5 147920-13-6 147920-19-2 148311-89-1 148472-83-7, 5-Chloro-3-(phenylsulfonyl)indole-2-carboxamide 149485-30-3 149485-98-3 149950-60-7 149950-61-8 150378-17-9, Indinavir 153562-59-5 153815-93-1 154598-52-4 158959-32-1, 1-[2-(4-Fluorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-33-2, 1-[2-(4-Fluoro-2-methylphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-34-3, 1-[2-(4-Chlorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-35-4, 1-[2-(2,4-Dichlorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-37-6, 1-[2-(4-Trifluoromethylphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-42-3, 1-[2-(4-Methylthiophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-43-4, 1-[2-(4-Fluorophenyl)-4,4-dimethylcyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-46-7, 4-[2-(4-Fluorophenyl)cyclopenten-1-yl]benzenesulfonamide 158959-47-8, 4-[2-(4-Chlorophenyl)cyclopenten-1-yl]benzenesulfonamide 158959-56-9, 4-[2-(4-Fluorophenyl)-4,4-dimethylcyclopenten-1-yl]benzenesulfonamide 159429-69-3, 1-[2-(4-Methoxyphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 159429-70-6, 1-[2-(4-Chlorophenyl)-4,4-dimethylcyclopenten-1-yl]-4-(methylsulfonyl)benzene 159499-99-7 159519-65-0, Enfuvirtide 159989-64-7, Nelfinavir 160705-95-3 160707-69-7 160707-70-0 160707-71-1 160963-01-9 162011-90-7 162054-19-5 163303-19-3 163303-25-1 163303-29-5 163303-38-6 163303-55-7 163451-80-7 165251-89-8 165328-42-7, 1-[2-(2,3-Difluorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 165328-49-4, 4-[2-(4-Chlorophenyl)-4,4-dimethylcyclopenten-1-yl]benzenesulfonamide 165328-51-8 168146-84-7 168299-83-0 168299-90-9 168433-84-9 169154-04-5 169154-07-8 169154-19-2 169154-24-9 169590-41-4, 4-[[5-(3-Fluoro-4-methoxyphenyl)-3-difluoromethyl]-1H-pyrazol-1-yl]benzenesulfonamide 169590-42-5 169902-71-0, 4-[2-(3-Chloro-4-fluorophenyl)cyclopenten-1-yl]benzenesulfonamide

169902-74-3, 4-[2-(3-Fluoro-4-methoxyphenyl)cyclopenten-1-yl]benzenesulfonamide 169902-75-4, 1-[2-(3-Chloro-4-methoxyphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 169951-23-9 169951-24-0 169951-25-1 169951-27-3 169951-28-4 170569-31-0 170569-42-3 170569-50-3 170569-86-5, 4-[5-(4-Chlorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide 170569-87-6, 4-[5-Phenyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide 170569-88-7, 4-[5-(4-Fluorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide 170569-91-2, 4-[5-(4-Methoxyphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide 170570-05-5 170570-25-9 170570-29-3 170570-31-7 170570-32-8 170570-33-9 170571-71-8 171888-46-3 173776-67-5 174470-77-0 175676-91-2 175676-92-3 175677-05-1 175677-06-2 175677-07-3 175677-13-1
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and compns. for treatment or prevention of HIV infection and related conditions using cyclooxygenase-2 selective inhibitors and antiviral agents)

IT 105380-83-4, 3'-Azido-2',3'-dideoxy-5-ethyluridine
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and compns. for treatment or prevention of HIV infection and related conditions using cyclooxygenase-2 selective inhibitors and antiviral agents)

RN 105380-83-4 HCAPLUS
CN Uridine, 3'-azido-2',3'-dideoxy-5-ethyl- (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2001:617821 HCAPLUS Full-text
DOCUMENT NUMBER: 135:175348
TITLE: Use of N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compounds for treating hepatitis virus infections
INVENTOR(S): Mueller, Richard A.; Bryant, Martin L.
PATENT ASSIGNEE(S): Pharmacia Corporation, USA
SOURCE: PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001060366	A1	20010823	WO 2001-US4512	20010213

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2001036938	A	20010827	AU 2001-36938		20010213
EP 1261339	A1	20021204	EP 2001-909153		20010213
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
JP 2003522791	T	20030729	JP 2001-559463		20010213
US 20050119310	A1	20050602	US 2003-203769		20030424
PRIORITY APPLN. INFO.:			US 2000-182362P	P	20000214
			WO 2001-US4512	W	20010213

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Provided are methods and compns. for treating hepatitis virus infections in mammals, especially humans. The methods comprise (1) administering N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compds. alone or in combination with nucleoside antiviral agents, nucleotide antiviral agents, mixts. thereof, or immunomodulating/immunostimulating agents, or (2) administering N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compds. alone or in combination with nucleoside antiviral agents, nucleotide antiviral agents, or mixts. thereof, and immunomodulating/immuno stimulating agents.

IC ICM A61K031-445
ICS A61P031-14

CC 1-5 (Pharmacology)

IT 3056-17-5, Stavudine 5536-17-4, Ara-A 7481-89-2, Dideoxycytidine 25526-93-6 29984-33-6, Ara-AMP 30516-87-1, 3'-Azido-3'-deoxythymidine 36791-04-5, 1-β-D-Ribofuranosyl-1,2,4-triazole-3-carboxamide 39809-25-1, Penciclovir 59277-89-3, Acyclovir 66341-18-2, Acyclovir triphosphate 69123-90-6, FIAC 69123-98-4, FIAU 69256-17-3, FMAU 69655-05-6, Dideoxyinosine 72458-45-8 72458-46-9 73243-67-1 77222-61-8 79206-10-3 79206-12-5 79206-14-7 79206-20-5 79206-22-7 79570-63-1 81117-35-3 81117-36-4 81117-38-6 82410-32-0, Ganciclovir 85326-06-3 87190-81-6 104227-87-4, Famciclovir 106941-25-7, PMEA 111687-37-7, D-Carbocyclic-2'-deoxyguanosine 115183-38-5 115249-95-1 121154-51-6 128985-11-5 131167-83-4 134678-17-4, 3TC 134680-32-3 137530-41-7 143491-54-7, FTC 143491-57-0 143616-58-4 147058-39-7 160632-03-1 160632-05-3 162398-48-3 162398-56-3 211987-28-9 211987-29-0 211987-30-3 211987-31-4 211987-32-5 211987-33-6 211987-34-7 211987-35-8 211987-36-9 211987-37-0 211987-38-1 211987-39-2 211987-40-5 211987-41-6 211987-42-7 211987-43-8 211987-44-9 211987-45-0 211987-46-1 211987-47-2 211987-48-3 211987-49-4 211987-50-7 211987-51-8 211987-52-9 211987-53-0 211987-54-1 211987-55-2 211987-56-3 211987-57-4 211987-58-5 211987-59-6 211987-60-9 211987-61-0 211987-62-1 223771-90-2 223772-09-6 238075-04-2 238075-05-3 238075-06-4 238075-07-5 238075-08-6 238075-09-7 238075-10-0 238075-11-1 238075-12-2 238075-13-3 238075-14-4 238075-15-5 238075-16-6 238075-17-7 238075-18-8 238075-19-9 238075-20-2 238075-21-3 238075-22-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment of hepatitis B and C virus infections with dideoxyiminoglucitols and antiviral nucleosides and nucleotides)

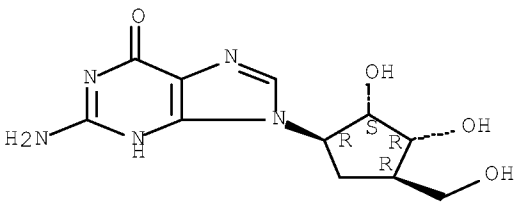
IT 111687-37-7, D-Carbocyclic-2'-deoxyguanosine

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment of hepatitis B and C virus infections with dideoxyiminoglucitols and antiviral nucleosides and nucleotides)

RN 111687-37-7 HCAPLUS

CN 6H-Purin-6-one, 2-amino-9-[(1R,2S,3R,4R)-2,3-dihydroxy-4-(hydroxymethyl)cyclopentyl]-1,9-dihydro- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> FILE HCAPLUS
FILE 'HCAPLUS' ENTERED AT 16:37:58 ON 20 APR 2010
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

=> D STAT QUE L24
L3 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "GUANOSINE, 2'-DEOXY-6-O-METHYL-"/CN
L5 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "9H-PURINE, 2-AMINO-9-(2-DEOXY-B-D-ERYTHRO-PENTOFURANOSYL)-6-METHOXY-"/CN
L6 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "9H-PURINE, 2-AMINO-9-(2-DEOXY-B-D-RIBOFURANOSYL)-6-METHOXY-"/CN
L7 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "2-AMINO-6-METHOXY-9-(2-DEOXY-B-D-ERYTHRO-PENTOFURANOSYL)PURINE"/CN
L8 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "2'-DEOXY-6-METHYLGUANOSINE"/CN
L9 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "6-O-METHYL-2'-DEOXYGUANOSINE"/CN
L10 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "6-O-METHYLDEOXYGUANOSINE"/CN
L11 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "O6-METHYL-2'-DEOXYGUANOSINE"/CN
L12 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "O6-METHYLDEOXYGUANOSINE"/CN
L16 535 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON C11H15N5O4/MF
L18 535 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L3 OR (L5 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12) OR L16
L19 535 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L16 OR L18
L20 1993 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L19
L23 53933 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON (ANTISENS? OR ANTI(W)SENS?)/BI
L24 18 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L20 AND L23

=> D L24 IBIB ABS HITIND HITSTR 1-18

L24 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2010:21719 HCAPLUS Full-text
DOCUMENT NUMBER: 152:161952
TITLE: Design of nuclease-resistant double-stranded polynucleotides for efficient RNA interference
INVENTOR(S): Koizumi, Makoto; Hirota, Yasuhide
PATENT ASSIGNEE(S): Daiichi Sankyo Company, Limited, Japan
SOURCE: PCT Int. Appl., 173pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2010001909	A1	20100107	WO 2009-JP61998	20090630

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE,

PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV,
SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI,
SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: JP 2008-172174 A 20080701
JP 2009-122742 A 20090521

AB Disclosed is general structures for designing double-stranded polynucleotides that are stable against RNases and present excellent RNA-silencing activities. Specifically disclosed is a guideline for designing double-stranded polynucleotides composed of sense strands and antisense strands. The double-stranded polynucleotides comprise polynucleotides containing nucleotide unit comprising alternating combinations of DNA and 2'-O-Me RNA. The polynucleotides containing nucleic acid analogs that have nucleotide sequences derived from the human β-catenin gene sense and antisense strands were prepared and the transcription interference effects of the double-stranded polynucleotide analogs on the human β-catenin gene were demonstrated. The polynucleotides containing nucleic acid analogs that have nucleotide sequences derived from the DDX3 (DEAD-box polypeptide 3, X-linked) gene sense and antisense strands were prepared and the transcription interference effects of the double-stranded polynucleotide analogs on the DDX3 gene were demonstrated.

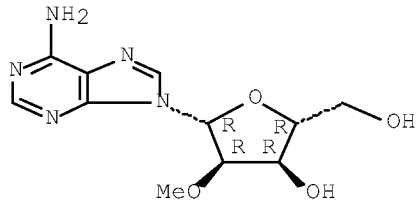
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 1, 6, 14

IT 2140-71-8 2140-72-9 2140-76-3, 2'-O-Methyluridine 2140-79-6
287737-38-6 287737-43-3 287737-54-6
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(design of nuclease-resistant double-stranded polynucleotides for efficient RNA interference)

IT 2140-79-6
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(design of nuclease-resistant double-stranded polynucleotides for efficient RNA interference)

RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2009:209431 HCAPLUS Full-text
DOCUMENT NUMBER: 150:252606
TITLE: Metabolomic cancer targets
INVENTOR(S): Chinnaiyan, Arul M.; Sreekumar, Arun
PATENT ASSIGNEE(S): The Regents of the University of Michigan, USA

SOURCE: U.S. Pat. Appl. Publ., 73pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20090047269	A1	20090219	US 2008-192681	20080815
CA 2695674	A1	20090226	CA 2008-2695674	20080815
WO 2009026152	A1	20090226	WO 2008-US73318	20080815

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.:

US 2007-956239P	P	20070816
US 2008-75540P	P	20080625
US 2008-133279P	P	20080627
WO 2008-US73318	W	20080815

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention relates to cancer markers. In particular, the present invention provides metabolites that are differentially present in prostate cancer and methods of inhibiting the growth of a cell by altering the level of such metabolites. For example, in some embodiments, the present invention provides a method of inhibiting growth of a cell (e.g., a cancer cell), comprising contacting a cell with a compound under conditions such that the compound increases or decreases the level of a cancer specific metabolite.

INCL 424094500; 435375000
CC 1-6 (Pharmacology)
Section cross-reference(s): 9, 14
IT Antisense nucleic acids
MicroRNA
Nucleic acids
siRNA
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cancer marker-metabolizing enzyme-targeting; metabolomic cancer markers as antitumor drug targets)
IT 50-69-1, Ribose 50-70-4, Sorbitol, biological studies 50-99-7, D-Glucose, biological studies 51-45-6, Histamine, biological studies 51-48-9, Thyroxine, biological studies 52-90-4, Cysteine, biological studies 53-84-9, Nicotinamide adenine dinucleotide 54-16-0, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-45-1, Serine, biological studies 56-81-5, Glycerol, biological studies 56-84-8, L-Aspartic acid, biological studies 56-86-0, L-Glutamic acid, biological studies 57-00-1, Creatine 57-03-4, Glycerol-3-phosphate 57-10-3, Hexadecanoic acid, biological studies 57-11-4, Octadecanoic acid, biological studies 57-13-6, Urea, biological studies 57-48-7, D-Fructose, biological studies 57-50-1, Sucrose, biological studies 57-88-5, Cholesterol, biological studies 58-08-2, Caffeine, biological studies 58-61-7, Adenosine, biological studies 58-63-9, Inosine 58-82-2, Bradykinin 58-96-8, Uridine

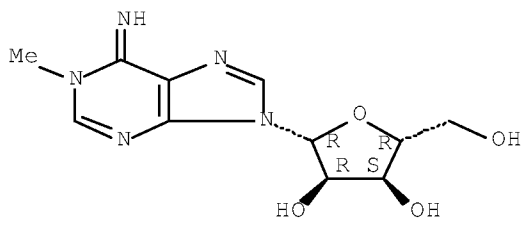
59-23-4, Galactose, biological studies 60-27-5, Creatinine 60-33-3, 9,12-Octadecadienoic acid (9Z,12Z)-, biological studies 61-90-5, Leucine, biological studies 62-57-7 65-46-3, Cytidine 65-71-4, Thymine 66-22-8, Uracil, biological studies 69-79-4, Maltose 69-89-6, Xanthine 69-93-2, Uric acid, biological studies 70-18-8, Glutathione, biological studies 70-47-3, Asparagine, biological studies 71-00-1, Histidine, biological studies 71-44-3, Spermine 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 73-22-3, Tryptophan, biological studies 73-40-5, Guanine 74-79-3, Arginine, biological studies 77-92-9, biological studies 79-83-4 83-88-5, Riboflavin, biological studies 85-87-0, Pyridoxamine 87-73-0, D-Saccharate 87-89-8, myo-Inositol 97-67-6 98-92-0, Nicotinamide 98-98-6, 2-Pyridinecarboxylic acid 107-35-7, Taurine 107-95-9, β-Alanine 107-97-1, Sarcosine 110-17-8, 2-Butenedioic acid (2E)-, biological studies 110-60-1, Putrescine 112-80-1, 9-Octadecenoic acid (9Z)-, biological studies 114-25-0, Biliverdin 118-00-3, Guanosine, biological studies 120-80-9, Catechol, biological studies 124-20-9, Spermidine 143-07-7, Dodecanoic acid, biological studies 144-90-1 146-80-5, Xanthosine 147-85-3, Proline, biological studies 149-32-6, Erythritol 150-25-4, Bicine 154-58-5, 1,5-Anhydroglucitol 156-39-8 306-23-0 372-75-8, Citrulline 373-49-9 407-41-0 470-55-3, Stachyose 475-31-0, Glycocholic acid 487-94-5, Indoxylsulfate 488-81-3, Adonitol 505-48-6, Suberic acid 506-12-7, Heptadecanoic acid 506-32-1, Arachidonic acid 526-95-4, D-Gluconic acid 535-75-1, 2-Piperidinecarboxylic acid 542-32-5, 2-Aminoadipate 544-63-8, Tetradecanoic acid, biological studies 563-24-6, Glycerophosphorylcholine 600-15-7 643-13-0, Fructose-6-phosphate 651-48-9, Dehydroepiandrosterone sulfate 997-55-7, N-Acetylaspartic acid 1071-46-1, Ethyl malonate 1192-20-7, Homoserine lactone 1501-27-5, Methyl glutarate 1811-31-0, N-Acetylgalactosamine 2041-14-7, Ciliatine 2387-71-5 2457-80-9 2922-83-0, Kynurenine 3025-96-5 3025-96-5, 4-Acetamidobutyric acid 3458-28-4, D-Mannose 3672-15-9, Mannose-6-phosphate 6027-13-0, Homocysteine 6205-08-9, N-α-Acetylornithine 7512-17-6, N-Acetylglucosamine 7643-75-6, L-Arabitol 10148-81-9, γ-Glutamylglutamine 14265-44-2, Orthophosphate, biological studies 15421-51-9, Inositol-1-phosphate 15763-06-1, 1-Methyladenosine 19253-88-4 22671-29-0, Hexanoylcarnitine 29908-03-0 34378-59-1 34612-38-9, Maltotetraose 37228-72-1, Glycine-N-methyl transferase 37642-65-2 97240-79-4, Topiramate
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(metabolomic cancer markers as antitumor drug targets)

IT 15763-06-1, 1-Methyladenosine
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(metabolomic cancer markers as antitumor drug targets)

RN 15763-06-1 HCAPLUS

CN Adenosine, 1-methyl- (CA INDEX NAME)

Absolute stereochemistry.



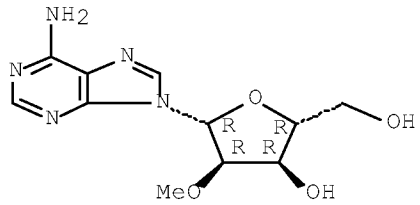
L24 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2008:881994 HCAPLUS Full-text
DOCUMENT NUMBER: 149:192928
TITLE: Preparations of double stranded RNAs modified for increased resistance to nucleases and superior RNA interference effects
INVENTOR(S): Kubo, Takanori; Oba, Hideki; Zhelev, Zhivko; Bakalova, Rumiana
PATENT ASSIGNEE(S): National Institute of Advanced Industrial Science & Technology, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 49pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2008167739	A	20080724	JP 2007-109778	20070418
PRIORITY APPLN. INFO.:			JP 2006-164671 A	20060614
			JP 2006-337296 A	20061214

AB Modifciation methods for dsRNAs (double stranded RNAs) for increased resistance to nucleases and superior RNA interference effects have been developed. The 5'-ends of the sense strands (15 .apprx. 27 n.t.) of the dsRNAs are blunt ends and modification groups are introduced to one of the n.t. at specific positions (#1, #1 .apprx. #4, #1 .apprx. #6 from the 5'-end, single or multiple positions). The modification groups are aminoalkyls (C1 .apprx. C40), thioalkyls (C1 .apprx. C40), cholesterols (with linkers), peptides (3 .apprx. 40 a.a.), aromatic groups (benzene derivs., phenols or naphthalene with linkers), polyethyleneglycols (average d.p., 7 .apprx. 200 with linkers), or oligonucleotides (DNAs or 2'-O-Me RNAs (5 .apprx. 50 n.t.) with complementary strands having functional groups). The dsRNAs comprising 27-nucleotide sense and antisense strands and the dsRNAs comprising 25-nucleotide sense and 23-nucleotide antisense strands are specifically claimed. Effects of siRNA modifications on nuclease resistance, Dicer processing, intracellular incorporation and RNAi efficiency were exptl. proved.

CC 3-1 (Biochemical Genetics)
IT 2140-71-8, 2'-O-Methyl guanosine 2140-72-9, 2'-O-Methyl cytidine
2140-76-3, 2'-O-Methyl uridine 2140-79-6, 2'-O-Methyl adenosine
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(siRNA modified with RNA containing; prepns. of double stranded RNAs modified for increased resistance to nucleases and superior RNA interference effects)
IT 2140-79-6, 2'-O-Methyl adenosine
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(siRNA modified with RNA containing; prepns. of double stranded RNAs modified for increased resistance to nucleases and superior RNA interference effects)
RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L24 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:216597 HCAPLUS Full-text
DOCUMENT NUMBER: 142:291323
TITLE: Compositions and methods for the treatment of severe acute respiratory syndrome (SARS)
INVENTOR(S): Hardee, Greg; Dellamary, Luis
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 217 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005020885	A2	20050310	WO 2004-US16196	20040521
WO 2005020885	A3	20050804		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-472774P P 20030521

AB The invention provides compns. and methods for treating a coronavirus infection, especially a SARS CoV infection. The compns. comprise an antiviral nucleoside or mimetic thereof, or an antiviral antisense agent, in a form suitable for pulmonary or nasal delivery. The methods comprise administration to a patient in need thereof the effective amount of an antiviral composition by pulmonary or nasal instillation.

IC ICM A61K
CC 1-5 (Pharmacology)
Section cross-reference(s): 63
ST antisense oligonucleotide antiviral pulmonary nasal microemulsion Coronavirus infection SARS
IT Antisense oligonucleotides
Nucleosides, biological studies
Oligomers
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. and methods for treatment of severe acute respiratory

syndrome)

IT 50-44-2 50-91-9 51-21-8 53-82-7 53-85-0 54-25-1 54-42-2
56-65-5, biological studies 58-60-6 58-61-7, Adenosine, biological
studies 58-63-9, Inosine 58-96-8, Uridine 59-14-3 61-19-8,
5'-Adenylic acid, biological studies 63-39-8, Uridine 5'-(tetrahydrogen
triphosphate) 65-47-4, Cytidine 5'-(tetrahydrogen triphosphate)
69-33-0 70-00-8 73-03-0 73-04-1 85-31-4 86-01-1 132-06-9,
Inosine 5'-(tetrahydrogen triphosphate) 146-77-0 146-92-9 147-94-4
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550-33-4 574-25-4 606-58-6 784-71-4 840-50-6 961-07-9
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RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(compns. and methods for treatment of severe acute respiratory
syndrome)

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RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. and methods for treatment of severe acute respiratory syndrome)

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RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. and methods for treatment of severe acute respiratory syndrome)

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(Biological study); USES (Uses)
(compns. and methods for treatment of severe acute respiratory
syndrome)

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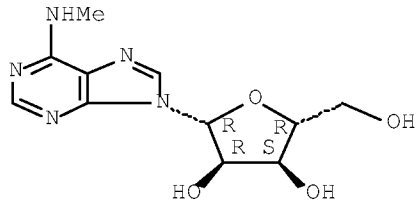
847663-84-7
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(compns. and methods for treatment of severe acute respiratory
syndrome)

IT 1867-73-8 2140-79-6 10300-22-8
15397-12-3 56973-12-7 70723-11-4
100644-69-7 120595-76-8 152540-76-6
444019-99-2 444020-69-3 632367-90-9
690269-87-5 847648-36-6 847652-17-9
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(compns. and methods for treatment of severe acute respiratory
syndrome)

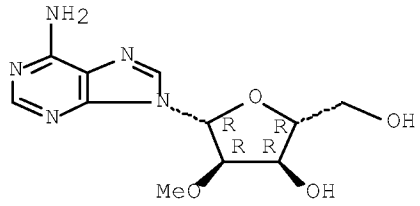
RN 1867-73-8 HCAPLUS
CN Adenosine, N-methyl- (CA INDEX NAME)

Absolute stereochemistry.



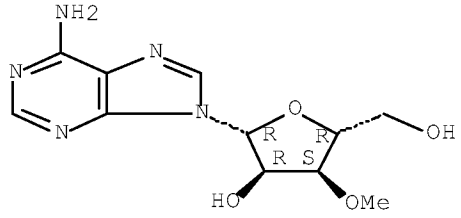
RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



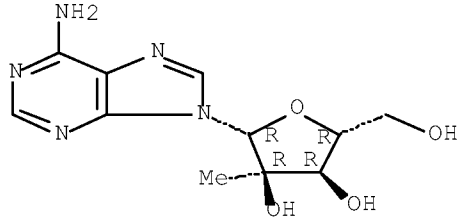
RN 10300-22-8 HCAPLUS
CN Adenosine, 3'-O-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



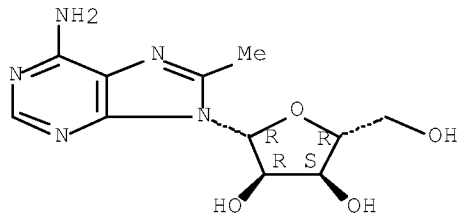
RN 15397-12-3 HCAPLUS
CN Adenosine, 2'-C-methyl- (CA INDEX NAME)

Absolute stereochemistry.



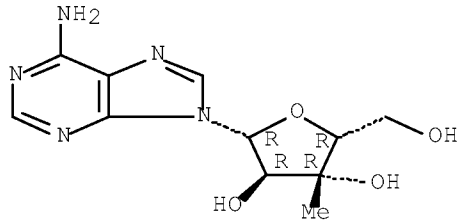
RN 56973-12-7 HCAPLUS
CN Adenosine, 8-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



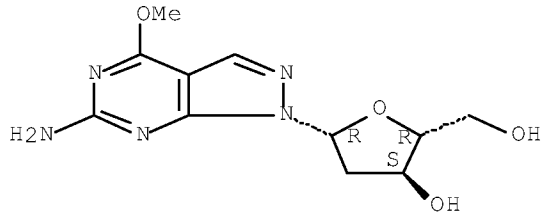
RN 70723-11-4 HCAPLUS
CN 9H-Purin-6-amine, 9-(3-C-methyl-β-D-xylofuranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



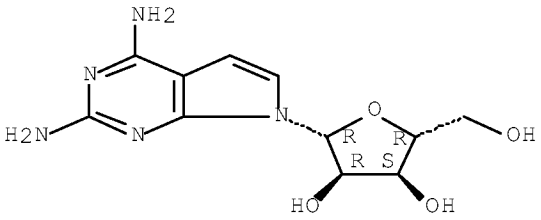
RN 100644-69-7 HCAPLUS
CN 1H-Pyrazolo[3,4-d]pyrimidin-6-amine,
1-(2-deoxy-β-D-erythro-pentofuranosyl)-4-methoxy- (CA INDEX NAME)

Absolute stereochemistry.



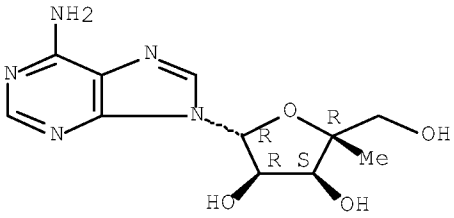
RN 120595-76-8 HCAPLUS
CN 7H-Pyrrolo[2,3-d]pyrimidine-2,4-diamine, 7-β-D-ribofuranosyl- (CA INDEX NAME)

Absolute stereochemistry.



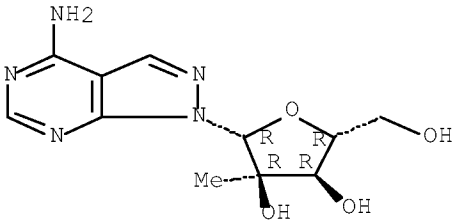
RN 152540-76-6 HCAPLUS
CN Adenosine, 4'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



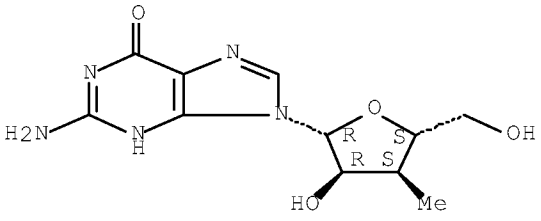
RN 444019-99-2 HCAPLUS
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine,
1-(2-C-methyl-β-D-ribofuranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



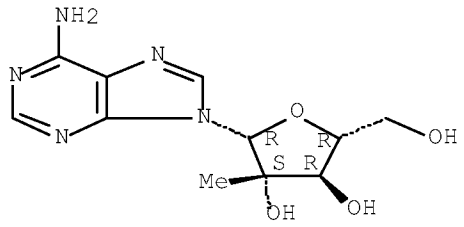
RN 444020-69-3 HCAPLUS
CN Guanosine, 3'-deoxy-3'-methyl- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



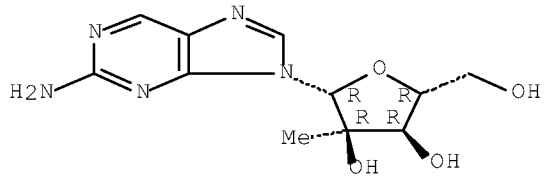
RN 632367-90-9 HCAPLUS
CN 9H-Purin-6-amine, 9-(2-C-methyl-β-D-arabinofuranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



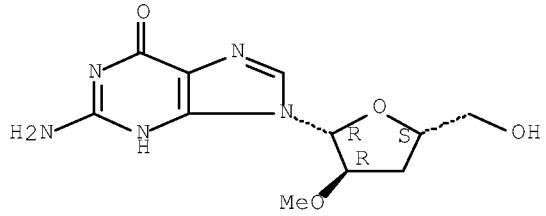
RN 690269-87-5 HCAPLUS
CN 9H-Purin-2-amine, 9-(2-C-methyl-β-D-ribofuranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



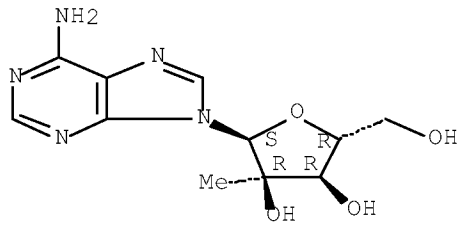
RN 847648-36-6 HCAPLUS
CN Guanosine, 3'-deoxy-2'-O-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 847652-17-9 HCAPLUS
CN 9H-Purin-6-amine, 9-(2-C-methyl-α-D-ribofuranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:99345 HCAPLUS Full-text
DOCUMENT NUMBER: 142:177053
TITLE: Preparation of purine nucleoside analogs for treating flaviviridae including hepatitis C
INVENTOR(S): Storer, Richard; Gosselin, Gilles; Dukhan, David; Leroy, Frederic
PATENT ASSIGNEE(S): Idenix Cayman Limited, Cayman I.; Centre National De La Recherche Scientifique; L'universite Montpellier II
SOURCE: PCT Int. Appl., 139 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005009418	A2	20050203	WO 2004-IB2703	20040726
WO 2005009418	A3	20050407		
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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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PRIORITY APPLN. INFO.:			US 2003-490216P	P	20030725
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			WO 2004-IB2703	W	20040726

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): CASREACT 142:177053; MARPAT 142:177053

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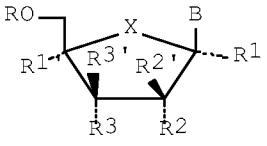

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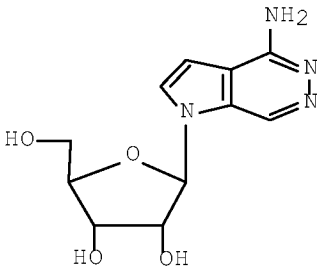

II

AB Title nucleosides I, wherein B is nucleobase; R is H, mono-, di-, or tri-phosphate, a stabilized phosphate, or phosphonate; X is O, S[O]n, CH, CHOH, substituted CH , NH, N-alkyl, N-alkenyl, N-alkynyl, S(O)N-alkyl, S(O)N-alkenyl, S(O)N-alkynyl, SCH-halogen; n is 0-2; R1 and R1' are independently H, OH, alkyl, azido, cyano, alkenyl, alkynyl, C(O)O-(alkyl), C(O)O-(alkenyl), C(O)O-(alkynyl), O(acyl), O(alkyl), O(alkenyl), O(alkynyl), halogen, NO2, NH2, NH-alkyl, NH(acyl), amide, S(O)N-alkyl, S(O)N-alkenyl, S(O)N-alkynyl, SCH-halogen; X is O, S[O]n, NH, N-alkyl, N-alkenyl, N-alkynyl, S(O)N-alkyl, S(O)N-alkenyl, S(O)N-alkynyl, or SCH-halogen; R2 and R3 are independently OH, NH2, SH, halogen, CN, NO2, amide, N3, alkyl, alkenyl, alkynyl, C(O)O-(alkyl), C(O)O-(alkenyl), C(O)O-(alkynyl), O(acyl), O(alkyl), O(alkenyl), O(alkynyl), OC(O)NH, NC, C(O)OH, SCN, OCN, S(alkyl), S(alkenyl), S(alkynyl), NH(alkyl), NH(alkenyl), NH(alkynyl), an amino acid residue, a prodrug or leaving group that provides OH in vivo, or an 3-7 membered heterocyclic ring having O, S and/or N independently as a heteroatom taken alone or in combination; R2' and R3' are independently H; alkyl, alkenyl, or alkynyl; C(O)O(alkyl), C(O)O(alkenyl), C(O)O(alkynyl), amide, O(acyl), O(alkyl), O(alkenyl), halogen, halogenated alkyl and particularly CF3, azido, cyano, NO2, S(alkyl), S(alkenyl), S(alkynyl), NH2, NH(alkyl), NH(alkenyl), NH(alkynyl), NH(acyl) were prepared as antiviral agents. This invention is directed to a method for treating a host, especially a human, infected with hepatitis C, flavivirus and/or pestivirus, comprising administering to that host an effective amount of an anti-HCV biol. active pentofuranonucleoside where the pentofuranonucleoside base is an optionally substituted 2-azapurine. The optionally substituted pentofuranonucleoside, or a salt or prodrug thereof, may be administered alone or in combination with one or more optionally substituted pentofuranonucleosides or other anti-viral agents. Thus, purine nucleoside II.2HCl was prepared and tested in vitro as antiviral agent. The antiviral agent is selected from the group consisting of an interferon, ribavirin, an interleukin, an NS3 protease inhibitor, a cysteine protease inhibitor, phenanthrenequinone, a thiazolidine derivative, a thiazolidine and a benzanilide, a helicase inhibitor, a polymerase inhibitor, a nucleotide analog, gliotoxin, cerulenin, an antisense phosphorothioate oligodeoxyribonucleotide, an inhibitor of 1RES-dependent translation, and a ribozyme.

IC ICM A61K031-00
CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 7, 63
IT 22121-03-5P 36519-17-2P 75909-15-8P 82137-56-2P 96017-56-0P

152343-50-5P 153186-32-4P 503543-47-3P 660845-69-2P 832743-25-6P
832743-30-3P 832743-31-4P 832743-32-5P 832743-35-8P
832743-36-9P 832743-37-0P 832743-38-1P 832743-39-2P 832743-40-5P
832743-41-6P 832743-42-7P 832743-44-9P 832743-45-0P 832743-46-1P
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RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of purine nucleoside analogs for treating flaviviridae including hepatitis C)

IT 95-92-1 107-19-7, 2-Propyn-1-ol 146-94-1 932-22-9 1122-28-7, 1H-Imidazole-4,5-dicarbonitrile 2627-69-2 3587-60-8 6974-32-9
7408-41-5 14215-97-5 15397-12-3 17476-04-9 17998-43-5
18715-38-3 28682-73-7 28682-94-2 135362-84-4 161677-79-8
832743-16-5 832743-27-8 832743-33-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of purine nucleoside analogs for treating flaviviridae including hepatitis C)

IT 5991-01-5P 7126-44-5P 22121-05-7P 22216-61-1P 25910-76-3P
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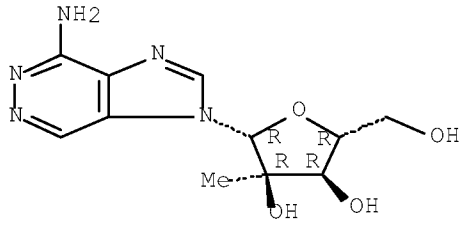
40995-55-9P 56290-86-9P 76143-39-0P 76143-42-5P 82137-50-6P
82137-52-8P 82137-55-1P 92574-75-9P 92574-76-0P 92574-77-1P
92574-78-2P 92574-79-3P 94619-73-5P 96017-24-2P 96017-34-4P
96017-48-0P 126023-53-8P 135362-85-5P 135362-86-6P 135362-88-8P
135362-89-9P 152343-47-0P 152343-48-1P 152343-63-0P 152343-64-1P
152540-75-5P 152540-76-6P 153186-29-9P 832743-18-7P
832743-21-2P 832743-22-3P 832743-23-4P 832743-24-5P 832743-26-7P
832743-28-9P 832743-29-0P 832743-34-7P 832743-43-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of purine nucleoside analogs for treating flaviviridae including hepatitis C)

IT 832743-30-3P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of purine nucleoside analogs for treating flaviviridae including hepatitis C)

RN 832743-30-3 HCAPLUS

CN 1H-Imidazo[4,5-d]pyridazin-4-amine, 1-(2-C-methyl-β-D-ribofuranosyl)- (CA INDEX NAME)

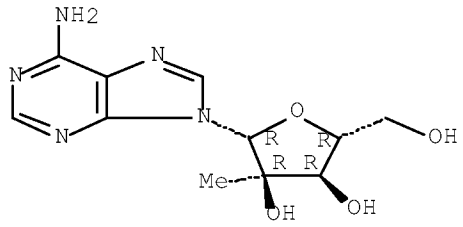
Absolute stereochemistry.



IT 15397-12-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of purine nucleoside analogs for treating flaviviridae including hepatitis C)

RN 15397-12-3 HCAPLUS
CN Adenosine, 2'-C-methyl- (CA INDEX NAME)

Absolute stereochemistry.



IT 152540-76-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of purine nucleoside analogs for treating flaviviridae including hepatitis C)
RN 152540-76-6 HCAPLUS
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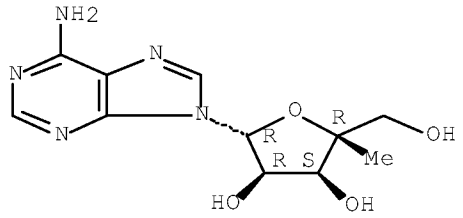
Absolute stereochemistry.



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:99157 HCAPLUS Full-text
DOCUMENT NUMBER: 142:170033
TITLE: Methods and compositions for the treatment or prevention of human immunodeficiency virus and related conditions using cyclooxygenase-2 selective inhibitors and antiviral agents
INVENTOR(S): Maziasz, Timothy
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 172 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 20050026902	A1	20050203	US 2004-769485	20040130
PRIORITY APPLN. INFO.:			US 2003-443910P	P 20030131

OTHER SOURCE(S): MARPAT 142:170033

AB The present invention provides compns. and methods for the treatment of human immunodeficiency virus (HIV) infection as well as HIV associated diseases and related disorders. More particularly, the invention provides a combination therapy for the treatment of HIV infection as well as HIV associated diseases and related disorders comprising the administration to a subject of an anti-human immunodeficiency virus agent in combination with a cyclooxygenase-2 selective inhibitor or an isomer or a pharmaceutically acceptable salt, ester, or prodrug thereof.

IC ICM A61K031-55
ICS A61K031-54

INCL 514217000; 514226500

CC 1-5 (Pharmacology)

IT Antisense oligonucleotides
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and compns. for treatment or prevention of HIV infection and related conditions using cyclooxygenase-2 selective inhibitors and antiviral agents)

IT 98-10-2D, Benzenesulfonamide, analogs and compds. 103-82-2D, Phenylacetic acid, derivs. 127-07-1, Hydroxyurea 129-46-4 254-04-6D, 2H-1-Benzopyran, compds. 254-04-6D, Benzopyran, compds. and analogs 2054-35-5D, analogs 3056-17-5 3112-85-4D, Methylsulfonylbenzene, analogs and compds. 3416-05-5, 3'-Deoxythymidine 4097-22-7, 2',3'-Dideoxyadenosine 4431-00-9, Aurintricarboxylic acid 7057-48-9 7481-88-1 7481-89-2, 2',3'-Dideoxycytidine 14665-52-2, Bis(2-nitrophenyl)sulfone 25526-93-6, 3'-Fluoro-3'-deoxythymidine 29828-28-2D, Dihydronaphthalene, analogs 29968-14-7D, Dihydroquinoline, analogs 30516-87-1, 3'-Azido-3'-deoxythymidine 30516-87-1D, 3'-Azido-3'-deoxythymidine, 5'alkylglycoside carbonates 31515-43-2, 2-Nitrophenyl phenyl sulfone 36791-04-5 41107-56-6, 3'-Fluoro-2',3'-dideoxyuridine 51246-79-8, 3'-Fluoro-2',3'-dideoxycytidine 51803-78-2 53766-80-6, 2',3'-Didehydro-2',3'-dideoxyguanosine 63585-09-1, Phosphonoformic acid trisodium salt 64224-21-1 66323-44-2 66323-46-4, 3'-Azido-2',3'-dideoxyguanosine 69655-05-6, 2',3'-Dideoxyinosine 71125-38-7 78794-60-2 79872-72-3 80937-31-1 84472-85-5, 3'-Azido-2',3'-dideoxyuridine 84472-89-9, 3'-Azido-2',3'-dideoxycytidine 85236-92-6, 3'-Azido-2',3'-dideoxy-5-iodouridine 85326-06-3, 2',3'-Dideoxyguanosine 85326-07-4, 6-Methyl-2',3'-dideoxyadenosine 87190-74-7, 3'-Azido-2',3'-dideoxy-5-fluorouridine 87190-79-2 87190-80-5 87190-84-9 87418-35-7 92562-88-4, 3'-Fluoro-2',3'-dideoxyguanosine 93014-16-5, 4-(2-Methyl-4-phenyl-5-oxazolyl)benzenesulfonamide 105380-83-4 , 3'-Azido-2',3'-dideoxy-5-ethyluridine 105784-82-5, 3'-Azido-2',3'-dideoxy-5-bromouridine 106060-85-9 107036-62-4, 5-Fluoro-2',3'-dideoxycytidine 107550-73-2 108441-50-5 108441-51-6, 3'-Azido-5-chloro-2',3'-dideoxyuridine 108895-46-1 109881-25-6 110142-99-9 110143-10-7 111495-90-0 111495-95-5 111495-96-6 111495-98-8 111496-01-6 114551-78-9 114753-53-6 115249-86-0, 2',3'-Dideoxy-3'-fluoro-5-bromouridine 115913-79-6 116333-41-6 119555-47-4 119644-22-3, 2',3'-Dideoxy-3'-fluoro-5-chlorouridine 119644-23-4 120443-30-3 120503-30-2, 6-Dimethylaminopurine-2',3'-dideoxyriboside 120503-34-6 120503-35-7, N-Ethyl-2',3'-dideoxyadenosine 120826-45-1 121117-72-4 121135-52-2 121135-53-3 121353-93-3 123027-56-5 123663-49-0 124770-85-0 124903-20-4 125056-58-8 126062-18-8 126320-77-2 126347-69-1 127245-22-1 127492-31-3 127492-32-4 129618-40-2 130108-72-4

130108-73-5, 4'-Azido-2'-deoxyadenosine 130108-74-6, 4'-Azido-2'-deoxyguanosine 130108-75-7, 4'-Azido-2'-deoxyuridine 130108-76-8, 4'-Azido-2'-deoxycytidine 130108-77-9, 4'-Azido-2'-deoxyinosine 130108-82-6, 4'-Azido-3'-deoxythymidine 130797-04-5 131293-25-9 131613-15-5 132235-73-5 132774-45-9 132796-66-8 132796-67-9 132796-68-0 132970-02-6 134379-77-4 134678-17-4, Epivir 135212-57-6 135525-66-5 135525-77-8 135560-41-7 135812-04-3 135812-34-9 136160-29-7 136160-30-0 136470-78-5, Ziagen 136816-75-6 136816-76-7 136816-96-1 136817-66-8 136891-12-8 137332-54-8 137945-48-3 138192-33-3 138226-12-7 139226-28-1 139418-97-6, 4'-Azido-5-chloro-2'-deoxyuridine 139888-11-2, 4'-Cyanothymidine 141030-34-4 141030-55-9 141781-17-1 142102-79-2 143390-74-3 143491-57-0 143809-38-5 143809-39-6 144239-69-0 144433-06-7 145417-33-0 145514-01-8 145986-26-1 146739-86-8 147058-39-7 147362-57-0 147440-15-1 147584-54-1 147920-12-5 147920-13-6 147920-19-2 148311-89-1 148472-83-7, 5-Chloro-3-(phenylsulfonyl)indole-2-carboxamide 149485-30-3 149485-98-3 149950-60-7 149950-61-8 150378-17-9, Indinavir 153562-59-5 153815-93-1 154598-52-4 158959-32-1, 1-[2-(4-Fluorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-33-2, 1-[2-(4-Fluoro-2-methylphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-34-3, 1-[2-(4-Chlorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-35-4, 1-[2-(2,4-Dichlorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-37-6, 1-[2-(4-Trifluoromethylphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-42-3, 1-[2-(4-Methylthiophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-43-4, 1-[2-(4-Fluorophenyl)-4,4-dimethylcyclopenten-1-yl]-4-(methylsulfonyl)benzene 158959-46-7, 4-[2-(4-Fluorophenyl)cyclopenten-1-yl]benzenesulfonamide 158959-47-8, 4-[2-(4-Chlorophenyl)cyclopenten-1-yl]benzenesulfonamide 158959-56-9, 4-[2-(4-Fluorophenyl)-4,4-dimethylcyclopenten-1-yl]benzenesulfonamide 159429-69-3, 1-[2-(4-Methoxyphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 159429-70-6, 1-[2-(4-Chlorophenyl)-4,4-dimethylcyclopenten-1-yl]-4-(methylsulfonyl)benzene 159499-99-7 159519-65-0, Enfuvirtide 159989-64-7, Nelfinavir 160705-95-3 160707-69-7 160707-70-0 160707-71-1 160963-01-9 162011-90-7 162054-19-5 163303-19-3 163303-25-1 163303-29-5 163303-38-6 163303-55-7 163451-80-7 165251-89-8 165328-42-7, 1-[2-(2,3-Difluorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 165328-49-4, 4-[2-(4-Chlorophenyl)-4,4-dimethylcyclopenten-1-yl]benzenesulfonamide 165328-51-8 168146-84-7 168299-83-0 168299-90-9 168433-84-9 169154-04-5 169154-07-8 169154-19-2 169154-24-9 169590-41-4, 4-[[5-(3-Fluoro-4-methoxyphenyl)-3-difluoromethyl]-1H-pyrazol-1-yl]benzenesulfonamide 169590-42-5 169902-71-0, 4-[2-(3-Chloro-4-fluorophenyl)cyclopenten-1-yl]benzenesulfonamide 169902-74-3, 4-[2-(3-Fluoro-4-methoxyphenyl)cyclopenten-1-yl]benzenesulfonamide 169902-75-4, 1-[2-(3-Chloro-4-methoxyphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene 169951-23-9 169951-24-0 169951-25-1 169951-27-3 169951-28-4 170569-31-0 170569-42-3 170569-50-3 170569-86-5, 4-[5-(4-Chlorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide 170569-87-6, 4-[5-Phenyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide 170569-88-7, 4-[5-(4-Fluorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide 170569-91-2, 4-[5-(4-Methoxyphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide 170570-05-5 170570-25-9 170570-29-3 170570-31-7 170570-32-8 170570-33-9 170571-71-8 171888-46-3

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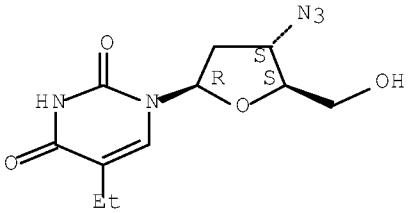
175677-06-2 175677-07-3 175677-13-1
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and compns. for treatment or prevention of HIV infection and related conditions using cyclooxygenase-2 selective inhibitors and antiviral agents)

IT 105380-83-4, 3'-Azido-2',3'-dideoxy-5-ethyluridine
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and compns. for treatment or prevention of HIV infection and related conditions using cyclooxygenase-2 selective inhibitors and antiviral agents)

RN 105380-83-4 HCAPLUS
CN Uridine, 3'-azido-2',3'-dideoxy-5-ethyl- (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2004:20697 HCAPLUS Full-text
DOCUMENT NUMBER: 140:87662
TITLE: 2'- and 3'-nucleoside prodrugs for treating Flaviviridae infections
INVENTOR(S): Sommadossi, Jean-pierre; La Colla, Paolo; Storer, Richard; Gosselin, Gilles
PATENT ASSIGNEE(S): Idenix (Cayman) Limited, Cayman I.; Centre National de la Recherche Scientifique; Universita Degli Studi di Cagliari
SOURCE: PCT Int. Appl., 2498 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004003000	A2	20040108	WO 2003-IB3901	20030627
WO 2004003000	A3	20041104		

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     US 20070027104       A1    20070201    US 2004-5469           20041206
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     US 7384924           B2    20080610
     US 20070032449       A1    20070208    US 2004-5441           20041206
     US 20070032407       A1    20070208    US 2004-5473           20041206
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     US 20070037735       A1    20070215    US 2004-5442           20041206
     US 20070042939       A1    20070222    US 2004-5445           20041206
     US 7635689           B2    20091222
     US 20070042991       A1    20070222    US 2004-5447           20041206
     US 7365057           B2    20080429
     US 20070042940       A1    20070222    US 2004-5467           20041206
     US 7547704           B2    20090616
     US 20070042990       A1    20070222    US 2004-5471           20041206
     US 20070060503       A1    20070315    US 2004-5440           20041206
     US 20070060498       A1    20070315    US 2004-5444           20041206
     US 7625875           B2    20091201
     US 20070060504       A1    20070315    US 2004-5446           20041206
     US 20070060541       A1    20070315    US 2004-5466           20041206
     US 20070060505       A1    20070315    US 2004-5472           20041206
     MX 2004012779        A     20050819    MX 2004-12779          20041216
     ZA 2004010249        A     20081029    ZA 2004-10249          20041220
     ZA 2004010290        A     20070926    ZA 2004-10290          20041221
     NO 2005000466        A     20050323    NO 2005-466            20050127
     IN 2005DN00341       A     20070202    IN 2005-DN341          20050128
     US 20070275883       A1    20071129    US 2006-516928         20060906
     US 7582618           B2    20090901
PRIORITY APPLN. INFO.:                       US 2002-392350P     P  20020628
                                             US 2002-392351P     P  20020628
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US 2003-466194P	P	20030428
US 2003-470949P	P	20030514
CN 2003-820501	A3	20030627
CN 2003-820701	A3	20030627
US 2003-607909	A1	20030627
US 2003-608907	A1	20030627
US 2003-609298	A1	20030627
WO 2003-IB3901	W	20030627
WO 2004-US15395	W	20040514

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 140:87662

AB 2' And 3'-Prodrugs of 1'-, 2'-, 3'-, or 4'-branched β-D or β-L nucleosides, or their pharmaceutically acceptable salts and derivs., are described which are useful in the prevention and treatment of Flaviviridae infections and other related conditions. These modified nucleosides provide superior results against flaviviruses and pestiviruses, including hepatitis C virus and viruses generally that replicate through an RNA-dependent RNA reverse transcriptase. Compds., compns., methods and uses are provided for the treatment of Flaviviridae infection, including HCV infection, that include the administration of an effective amount of the prodrugs of the invention, or their pharmaceutically acceptable salts or derivs. These drugs may optionally be administered in combination or alternation with further antiviral agents to prevent or treat Flaviviridae infections and other related conditions. Preparation of compds. of the invention is included.

IC ICM C07H019-00

CC 1-5 (Pharmacology)
Section cross-reference(s): 33, 63

IT Phosphorothioate oligonucleotides
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antisense; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Antisense oligonucleotides
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(phosphorothioate; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT 2096-10-8 15397-12-3 31448-54-1 188413-99-2 374750-30-8 640725-73-1 640725-74-2 640725-75-3 640725-76-4 640725-77-5
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside prodrugs for treating Flaviviridae infections)

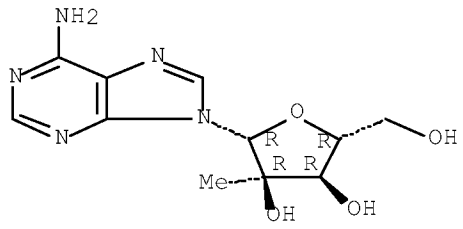
IT 152540-76-6P 153186-26-6P 153186-32-4P 503543-48-4P 503543-52-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(nucleoside prodrugs for treating Flaviviridae infections)

IT 15397-12-3
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside prodrugs for treating Flaviviridae infections)

RN 15397-12-3 HCAPLUS

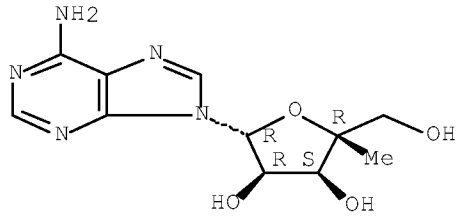
CN Adenosine, 2'-C-methyl- (CA INDEX NAME)

Absolute stereochemistry.



IT 152540-76-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(nucleoside prodrugs for treating Flaviviridae infections)
RN 152540-76-6 HCAPLUS
CN Adenosine, 4'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:951160 HCAPLUS Full-text
DOCUMENT NUMBER: 140:13688
TITLE: Oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers, or when hybridized to RNA, as substrates for RNA cleaving enzymes
INVENTOR(S): Eldrup, Anne; Cook, Phillip Dan; Parshall, Lynne B.
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 161 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003100017	A2	20031204	WO 2003-US16526	20030523
WO 2003100017	A3	20040826		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,

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             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2003241621         A1    20031212    AU 2003-241621          20030523
     US 20040014108        A1    20040122    US 2003-444298          20030523
PRIORITY APPLN. INFO.:                       US 2002-383358P      P  20020524
                                             WO 2003-US16526      W  20030523
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S):         MARPAT 140:13688
AB    Disclosed are oligonucleotides that include one or more modified nucleoside units.
      The examples present the representative preparation of modified nucleosides and
      nucleoside amidites, for incorporation into said oligonucleotides.  The
      oligonucleotides are particularly useful as antisense agents, ribozymes aptamer,
      siRNA agents, probes and primers or, when hybridized to an RNA, as a substrate for
      RNA cleaving enzymes including Rnase H and dsRNase.
IC    ICM  C12N
CC    3-1 (Biochemical Genetics)
      Section cross-reference(s): 33
ST    oligonucleotide modified nucleoside linkage antisense ribozyme
      aptamer; siRNA probe primer RNA cleavage oligonucleotide modified
      nucleoside amidite
IT    Nucleosides, biological studies
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
      (Uses)
         (2'-ribo-; oligonucleotides having modified nucleoside units with
         various linkages, and their uses as antisense agents,
         ribozymes, aptamers, siRNA, probes, and primers)
IT    Oligonucleotides
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
      (Uses)
         (3'-alkylene phosphonate-linked; oligonucleotides having modified
         nucleoside units with various linkages, and their uses as
         antisense agents, ribozymes, aptamers, siRNA, probes, and
         primers)
IT    Oligonucleotides
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
      (Uses)
         (3'-amino phosphoramidate-linked; oligonucleotides having modified
         nucleoside units with various linkages, and their uses as
         antisense agents, ribozymes, aptamers, siRNA, probes, and
         primers)
IT    Oligonucleotides
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
      (Uses)
         (5'-alkylene phosphonate-linked; oligonucleotides having modified
         nucleoside units with various linkages, and their uses as
         antisense agents, ribozymes, aptamers, siRNA, probes, and
         primers)
IT    Primers (nucleic acid)
      RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST
      (Analytical study); BIOL (Biological study); USES (Uses)
         (PCR, comprising modified oligonucleotide; oligonucleotides having
         modified nucleoside units with various linkages, and their uses as
         antisense agents, ribozymes, aptamers, siRNA, probes, and
         primers)
IT    Oligonucleotides
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
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(Uses)
(alkylphosphonate-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(aminoalkylphosphoramidate-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(aminoalkylphosphotriester-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(boranophosphate-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(chiral phosphonate-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Phosphorothioate oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(chiral; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Aptamers
(comprising modified oligonucleotide; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(comprising modified oligonucleotide; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Ribozymes
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(comprising modified oligonucleotide; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(deoxynucleosides, within oligonucleotide; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and

primers)
IT Oligonucleotides
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(diagnostic; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)
IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(methylphosphonate-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)
IT Nucleosides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(modified; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)
IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, alkene-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)
IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, amide-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)
IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, formacetyl-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)
IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, methylene formacetyl-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)
IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, methylenehydrazino-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)
IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, methyleneimino-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)
IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES

(Uses)
(oligonucleosides, morpholino-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, riboacetyl-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, siloxane-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, sulfamate-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, sulfide-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, sulfonamide-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, sulfonate-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, sulfone-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, sulfoxide-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Nucleosides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleosides, thioformacetyl-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Antisense oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(phosphinate-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Phosphorothioate oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(phosphorodithioate; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(phosphotriester-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(selenophosphate-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Double stranded RNA
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(small interfering, comprising modified oligonucleotide on at least one strand; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(thionoalkylphosphoramidate-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(thionoalkylphosphotriester-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(thionophosphoramidate-linked; oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(with one inverted internucleotide linkage (3'to 3' or 5'to 5'); oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers)

IT 27175-64-0P, Lutidine 37105-93-4P 104579-03-5P 163759-49-7P
163759-50-0P 168427-35-8P 171763-19-2P 176755-83-2P 212061-24-0P
212061-25-1P 212061-26-2P 212061-27-3P 212061-28-4P 212061-29-5P
251647-49-1P 253145-84-5P 253145-85-6P 443642-30-6P 443642-31-7P
443642-32-8P 443642-33-9P 443642-35-1P 443642-36-2P 443642-37-3P
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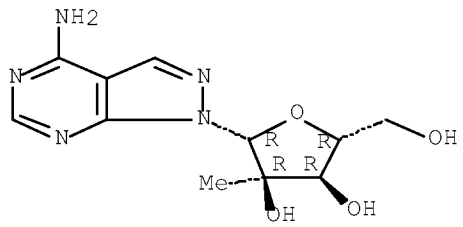
443642-54-4P 443642-55-5P 443642-58-8P 443642-61-3P 443642-62-4P
443642-64-6P 443642-65-7P 443642-68-0P 443642-69-1P 443642-70-4P
443642-71-5P 443642-72-6P 443642-73-7P 443642-77-1P 443642-78-2P
443642-79-3P 443642-81-7P 443642-82-8P 443642-84-0P 443642-85-1P
443643-38-7P 444019-99-2P 444020-01-3P 582313-25-5P
629670-26-4P 629670-27-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of modified nucleosides and nucleoside amidites for incorporation into oligonucleotides, and uses)

IT 444019-99-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of modified nucleosides and nucleoside amidites for incorporation into oligonucleotides, and uses)

RN 444019-99-2 HCAPLUS
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine, 1-(2-C-methyl-β-D-ribofuranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:951042 HCAPLUS Full-text
DOCUMENT NUMBER: 140:24085
TITLE: Oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense

agents, ribozymes, aptamers, siRNA, probes, and primers, or when hybridized to RNA, as substrates for RNA cleaving enzymes

INVENTOR(S): Eldrup, Anne; Cook, Phillip Dan; Parshall, B. Lynne
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 271 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2003099840	A1	20031204	WO 2003-US16502		20030523
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
AU 2003237249	A1	20031212	AU 2003-237249		20030523
US 20040014957	A1	20040122	US 2003-444628		20030523
PRIORITY APPLN. INFO.:			US 2002-383438P	P	20020524
			WO 2003-US16502	W	20030523

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 140:24085

AB Disclosed are oligonucleotides that include one or more modified nucleoside units. The examples present the representative preparation of modified nucleosides and nucleoside amidites, for incorporation into said oligonucleotides. The oligonucleotides are particularly useful as antisense agents, ribozymes aptamer, siRNA agents, probes and primers or, when hybridized to an RNA, as a substrate for RNA cleaving enzymes including Rnase H and dsRNase.

IC ICM C07H021-04
ICS A61K031-70
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 33
ST oligonucleotide modified nucleoside linkage antisense ribozyme aptamer; siRNA probe primer RNA cleavage oligonucleotide modified nucleoside amidite
IT Antisense oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleotides having modified nucleoside units with various linkages)
IT 13039-47-9P 105931-57-5P 136208-63-4P 160527-01-5P 163759-49-7P
163759-94-2P 212061-28-4P 212061-29-5P 212061-30-8P 251647-53-7P
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443642-47-5P 443642-48-6P 443642-49-7P 443642-53-3P 443642-56-6P
443642-57-7P 443642-60-2P 443642-63-5P 443642-74-8P 443642-80-6P
444018-74-0P 444018-76-2P 444018-77-3P 444018-79-5P 444018-81-9P
444018-85-3P 444018-88-6P 444018-90-0P 444018-92-2P 444018-96-6P
444018-99-9P 444019-03-8P 444019-05-0P 444019-30-1P 444019-39-0P
444020-62-6P 444020-66-0P 444020-74-0P 444020-75-1P 444020-76-2P
444020-79-5P 444020-82-0P 632367-90-9P
RL: SPN (Synthetic preparation); PREP (Preparation)

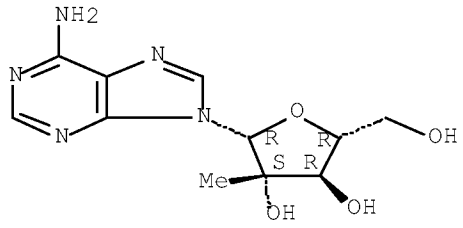
(oligonucleotides having modified nucleoside units with various linkages)

IT 632367-90-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(oligonucleotides having modified nucleoside units with various linkages)

RN 632367-90-9 HCAPLUS

CN 9H-Purin-6-amine, 9-(2-C-methyl-β-D-arabinofuranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2003:301442 HCAPLUS Full-text

DOCUMENT NUMBER: 139:53244

TITLE: Synthesis of Antisense Oligonucleotides Carrying Modified 2-5A Molecules at Their 5'-Termini and Their Properties

AUTHOR(S): Ueno, Yoshihito; Kato, Yoichiro; Okatani, Shusaku; Ishida, Norihisa; Nakanishi, Masayuki; Kitade, Yukio

CORPORATE SOURCE: Department of Biomolecular Science, Faculty of Engineering, Gifu University, Gifu, 501-1193, Japan

SOURCE: Bioconjugate Chemistry (2003), 14(3), 690-696
CODEN: BCCHES; ISSN: 1043-1802

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:53244

AB The synthesis of 8-methyladenosine-substituted 2-5A tetramers with hydroxyalkyl groups at the 5'-phosphates and the corresponding 2-5A- antisense chimeras is described. These oligonucleotides were synthesized by the phosphoramidite method with a DNA/RNA synthesizer. These 2-5A tetramers with hydroxyethyl and hydroxybutyl groups at their 5'-phosphates were more resistant to hydrolysis by alkaline phosphatase than those without the hydroxyalkyl groups. Incorporation of the hydroxyethyl group into the 2-5A tetramer and 2-5A-antisense chimera slightly reduced the abilities of their analogs to activate recombinant human RNase L, but the abilities of the 2-5A tetramer and the 2-5A-antisense chimera both with the hydroxyethyl group and 8-methyladenosine returned to 80 and 50% relative to those of the oligonucleotides without the hydroxyethyl group and 8-methyladenosine, resp. Furthermore, the enzyme activated by 8-methyladenosine-substituted 2-5A-antisense chimera with the hydroxyethyl group cleaved the complementary RNA as efficiently as that activated by 2-5A-antisense chimera without the hydroxyethyl group and 8-

methyladenosine. Thus, the 2-5A- antisense chimera carrying the hydroxyethyl group and 8-methyladenosine will be a candidate for a novel antisense mol.

CC 33-10 (Carbohydrates)
Section cross-reference(s): 6, 7

ST phosphatase resistance hydrolysis antisense RNA duplex prepn
RNase activation; bond cleavage hydrolysis resistance RNA duplex prepn
RNase activation; RNA duplex prepn enzyme resistance antisense chimera oligonucleotide adenosine

IT Human
Hydrolysis
(synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)

IT Antisense RNA
Antisense oligonucleotides
Double stranded RNA
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)

IT 76774-39-5, RNase L
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(human; synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)

IT 9001-78-9 544716-83-8
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)

IT 544716-79-2P 544716-80-5P 544716-81-6P 544716-82-7P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)

IT 66048-58-6P 512172-16-6P 512172-17-7P 512172-18-8P 512172-19-9P
544716-84-9P 544716-85-0P 544716-86-1P 544716-87-2P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)

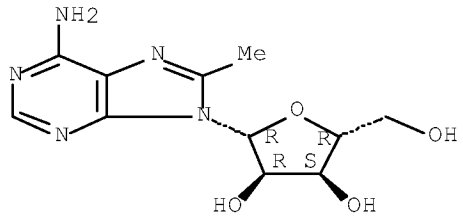
IT 56973-12-7 161029-24-9 225786-84-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)

IT 512172-11-1P 512172-12-2P 512172-14-4P 512172-15-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)

IT 512172-13-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)

IT 56973-12-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)
RN 56973-12-7 HCAPLUS
CN Adenosine, 8-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



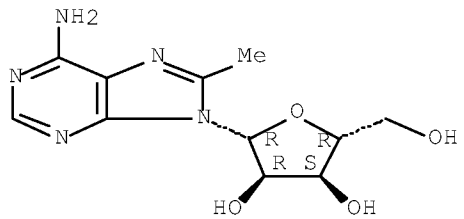
OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2002:954771 HCAPLUS Full-text
DOCUMENT NUMBER: 138:321497
TITLE: Synthesis of the antisense oligonucleotides carrying the modified 2-5a molecules at their 5'-termini and their properties
AUTHOR(S): Ueno, Yoshihito; Kato, Yoichiro; Okatani, Shusaku; Kitade, Yukio
CORPORATE SOURCE: Department of Biomolecular Science, Faculty of Engineering, Gifu University, Gifu, 501-1193, Japan
SOURCE: Nucleic Acids Research Supplement (2002), 2(Twenty-ninth Symposium on Nucleic Acids Chemistry), 45-46
CODEN: NARSCE
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:321497

AB The synthesis of 8-methyladenosine-substituted 2-5A tetramers with hydroxyalkyl groups at the 5'-phosphates and the corresponding 2-5A- antisense chimeras is described. These oligonucleotides were synthesized by the phosphoramidite method with a DNA/RNA synthesizer. These 2-5A tetramers, with hydroxyethyl and hydroxybutyl groups at their 5'-phosphates, resp., were more resistant to hydrolysis by alkaline phosphatase than those without the hydroxyalkyl groups. Incorporation of the hydroxyethyl group into the 2-5A tetramer and 2-5A-antisense chimera slightly reduced the abilities of their analogs to activate recombinant human RNase L, but the abilities of the hydroxyethyl 2-5A tetramer, and the 2-5A-antisense chimera, (I) [HO(CH2)2O-p5'ApAp(me8A)pA2'-O(CH2)4OpO(CH2)4O-5'(2'-O-Me(CUCUCAGGGGUCGCCGUCAU))3'], with the hydroxyethyl group and 8-methyladenosine returned to 80 and 50% relative to those of the un-modified oligonucleotides. Furthermore, the enzyme activated by I cleaved the complementary RNA as efficiently as that activated by 2-5A- antisense chimera without the hydroxyethyl group and . Thus, the 2-5A-antisense chimera carrying the hydroxyethyl group and 8-methyladenosine was found to be a good candidate for an antisense mol.

CC 33-10 (Carbohydrates)
Section cross-reference(s): 6
ST methyladenosine hydroxyalkyl antisense oligonucleotide prepn
RNase L activation activity
IT Human
(preparation of antisense oligoribonucleotides carrying modified
2-5a mols. at their 5'-termini and their RNase L activation activity)
IT Enzymes, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of antisense oligoribonucleotides carrying modified
2-5a mols. at their 5'-termini and their RNase L activation activity)
IT Antisense oligonucleotides
RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(preparation of antisense oligoribonucleotides carrying modified
2-5a mols. at their 5'-termini and their RNase L activation activity)
IT 512862-58-7 514229-75-5
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of antisense oligoribonucleotides carrying modified
2-5a mols. at their 5'-termini and their RNase L activation activity)
IT 66048-58-6P 512172-16-6P 512172-17-7P 512172-18-8P 512172-19-9P
512862-54-3P 512862-55-4P 512862-56-5P 512862-57-6P
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of antisense oligoribonucleotides carrying modified
2-5a mols. at their 5'-termini and their RNase L activation activity)
IT 56973-12-7, 8-Methyladenosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of antisense oligoribonucleotides carrying modified
2-5a mols. at their 5'-termini and their RNase L activation activity)
IT 512172-11-1P 512172-12-2P 512172-13-3P 512172-14-4P 512172-15-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of antisense oligoribonucleotides carrying modified
2-5a mols. at their 5'-termini and their RNase L activation activity)
IT 56973-12-7, 8-Methyladenosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of antisense oligoribonucleotides carrying modified
2-5a mols. at their 5'-termini and their RNase L activation activity)
RN 56973-12-7 HCAPLUS
CN Adenosine, 8-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

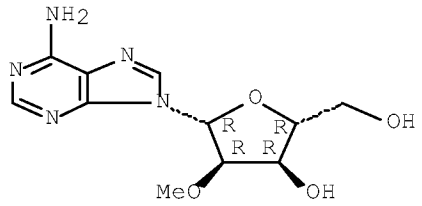
L24 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2000:182368 HCAPLUS Full-text

DOCUMENT NUMBER: 132:347832
TITLE: Nucleic acid related compounds. 112. Synthesis of amide-linked [(3')CH2CO-NH(5')] nucleoside analogs of small oligonucleotides
AUTHOR(S): Robins, Morris J.; Doboszewski, Bogdan; Nilsson, Bradley L.; Peterson, Matt A.
CORPORATE SOURCE: Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT, 84602-5700, USA
SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2000), 19(1 & 2), 69-86
CODEN: NNNAFY; ISSN: 1525-7770
PUBLISHER: Marcel Dekker, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:347832

AB We report syntheses of new amide-linked (di-penta)nucleoside analogs of antisense oligonucleotide components. Solution-phase coupling of 3'-(carboxymethyl)-3'-deoxy- and 5'-amino-5'-deoxynucleoside derivs. provides amide dimers. Activated [3'-(carboxymethyl)-3'-deoxy] units with a 5'-azido-5'-deoxy function provide "masked" 5'-amino-5'-deoxy residues for chain extension, and a 5'-O-DMT-protected unit provides the 5'-terminus for attachment to a phosphodiester linkage.

CC 33-9 (Carbohydrates)
IT 100-02-7, reactions 2140-79-6 131132-30-4 133023-98-0
251296-78-3 251296-95-4 251296-99-8 251297-00-4 268748-03-4
268748-04-5 268748-05-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of amide-linked nucleoside analogs of small oligonucleotides)
IT 2140-79-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of amide-linked nucleoside analogs of small oligonucleotides)
RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 21 THERE ARE 21 CAPLUS RECORDS THAT CITE THIS RECORD (21 CITINGS)
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:655999 HCAPLUS Full-text
DOCUMENT NUMBER: 131:282376
TITLE: Antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages
INVENTOR(S): Ecker, David J.; Cook, Phillip Dan; Monia, Brett P.;

Freier, Susan M.; Sanghvi, Yogesh S.
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: U.S., 64 pp., Cont.-in-part of U.S. Ser. No. 317,289.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 326
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5965722	A	19991012	US 1997-848840	19970430
WO 9313121	A1	19930708	WO 1992-US11339	19921223
W: AU, BB, BG, BR, CA, CS, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG				
EP 1044987	A2	20001018	EP 2000-202252	19921223
EP 1044987	A3	20011004		
EP 1044987	B1	20060215		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
JP 2001002696	A	20010109	JP 2000-143468	19921223
EP 1695979	A2	20060830	EP 2006-75176	19921223
EP 1695979	A3	20060906		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
US 5386023	A	19950131	US 1993-40903	19930331
US 5489677	A	19960206	US 1993-40526	19930331
WO 9408003	A1	19940414	WO 1993-US9346	19931001
W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US, VN				
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HU 73335	A2	19960729	HU 1995-979	19931001
US 5866698	A	19990202	US 1994-227180	19940413
US 5623065	A	19970422	US 1994-244993	19940621
US 5618704	A	19970408	US 1994-300072	19940902
US 5792844	A	19980811	US 1994-317289	19941003
US 5808023	A	19980915	US 1994-335046	19941107
US 5859221	A	19990112	US 1995-468037	19950606
US 7015315	B1	20060321	US 1995-465866	19950606
US 5969118	A	19991019	US 1997-794493	19970204
AU 9726244	A	19971106	AU 1997-26244	19970624
AU 713740	B2	19991209		
CA 2289454	A1	19981105	CA 1998-2289454	19980430
WO 9849349	A1	19981105	WO 1998-US8800	19980430
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RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9875638	A	19981124	AU 1998-75638	19980430
AU 731088	B2	20010322		
EP 981648	A1	20000301	EP 1998-923319	19980430
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001500530	T	20010116	JP 1998-547418	19980430
US 6232463	B1	20010515	US 1998-128508	19980804
US 6420549	B1	20020716	US 1998-131102	19980807

US 6359124	B1	20020319	US 1999-248386	19990212
US 20030181693	A1	20030925	US 2002-195211	20020715
US 6849723	B2	20050201		

PRIORITY APPLN. INFO.:

US 1991-801168	B1	19911120
US 1991-814961	B2	19911224
US 1992-958134	B2	19921005
WO 1992-US11339	B1	19921223
US 1993-7996	B2	19930121
US 1993-39979	B1	19930330
US 1993-40526	A2	19930331
US 1993-40903	A3	19930331
US 1993-40933	B1	19930331
WO 1993-US9346	B1	19931001
US 1994-227180	A2	19940413
US 1994-244993	A2	19940621
US 1994-300072	A3	19940902
US 1994-317289	A2	19941003
US 1994-335046	A2	19941107
US 1995-411734	A2	19950403
US 1995-465866	A2	19950606
US 1995-468037	A2	19950606
US 1995-488256	A2	19950607
US 1997-794493	A2	19970204
US 1990-463358	B2	19900111
US 1990-518929	B2	19900504
US 1990-558663	A2	19900727
US 1990-566836	A2	19900813
US 1990-566977	B2	19900813
WO 1991-US2558	W	19910415
US 1991-703619	A2	19910521
US 1991-715196	A2	19910614
US 1991-814861	B2	19911224
US 1992-835932	A2	19920305
WO 1992-US4294	B2	19920521
US 1992-903160	A2	19920624
US 1992-854634	B2	19920701
EP 1993-902851	A3	19921223
EP 2000-202252	A3	19921223
JP 1993-511953	A3	19921223
AU 1993-38025	A3	19930225
US 1997-848840	A	19970430
US 1997-948151	A1	19971009
WO 1998-US8800	W	19980430
US 1998-131102	A1	19980807
US 1999-248386	A2	19990212

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Compns. and methods are provided for the modulation of expression of the human ras gene in both the normal and activated forms. Oligonucleotides are provided that have methylene(methylimino) linkages alternating with phosphorothioate or phosphodiester linkages. Further oligonucleotides are provide that have a first region having a methylene(methylimino) linkage alternating with a phosphorothioate or phosphodiester linkage and a second region having phosphorothioate linkages. Such oligonucleotides can be used for diagnostics as well as for research purposes including methods for diagnosis, detection and treatment of conditions arising from the activation of the H-ras gene. Thus, a number of different phosphorothioate-linked antisense oligonucleotides, some containing methylene(methylimino)-linkages, were tested for inhibition of H-ras gene expression as well as tumor cell growth in vivo. These oligonucleotide analogs were directed either to the initiation codon or to mutant codon 12.

IC ICM C07H021-02
ICS C07H021-04; C12Q001-68; A61K048-00

INCL 536023100
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 1
ST antisense oligonucleotide methylene methylimino linkage ras gene
IT Antitumor agents
(antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages)
IT Antisense oligonucleotides
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages)
IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(c-Ha-ras; antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages)
IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(c-Ki-ras; antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages)
IT 147306-08-9DP, analogs 147306-10-3DP, analogs 181982-21-8P, 2: PN: WO0004034 SEQID: 2 unclaimed DNA 246220-06-4P 246220-07-5P 246220-08-6P 246220-09-7P 246220-10-0P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages)
IT 2140-79-6, 2'-O-Methyladenosine 55486-09-4 110764-72-2 153631-19-7 183737-04-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages)
IT 171176-42-4P 183737-02-2P 183737-06-6P 183737-12-4P 183737-38-4P 215670-01-2P 215670-02-3P 215670-03-4P 215670-04-5P 215670-05-6P 215670-06-7P 215670-07-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages)
IT 181982-21-8, 5: PN: WO9960167 SEQID: 4 unclaimed DNA 186108-08-7, PN: US5965722 SEQID: 4 unclaimed DNA 186108-09-8, PN: US5965722 SEQID: 5 unclaimed DNA 186108-10-1, PN: US5965722 SEQID: 6 unclaimed DNA 186108-11-2, PN: US5965722 SEQID: 7 unclaimed DNA 186108-12-3, PN: US5965722 SEQID: 11 unclaimed DNA 186108-13-4, PN: US5965722 SEQID: 12 unclaimed DNA 186108-14-5, PN: US5965722 SEQID: 13 unclaimed DNA 186108-15-6, PN: US5965722 SEQID: 14 unclaimed DNA 186108-16-7, PN: US5965722 SEQID: 15 unclaimed DNA 186108-17-8, PN: US5965722 SEQID: 16 unclaimed DNA 186108-18-9, PN: US5965722 SEQID: 17 unclaimed DNA 186108-19-0, PN: US5965722 SEQID: 18 unclaimed DNA 186108-20-3, PN: US5965722 SEQID: 19 unclaimed DNA 186108-32-7, PN: US5965722 SEQID: 21 unclaimed DNA 232243-16-2, PN: US5965722 SEQID: 27 unclaimed DNA 232243-18-4, PN: US5965722 SEQID: 26 unclaimed DNA 243935-98-0, PN: US5965722 SEQID: 20 unclaimed DNA 243935-99-1, PN: US5965722 SEQID: 22 unclaimed DNA 243936-00-7, PN: US5965722 SEQID: 23 unclaimed DNA 243936-01-8, PN: US5965722 SEQID: 24 unclaimed DNA 243936-02-9, PN:

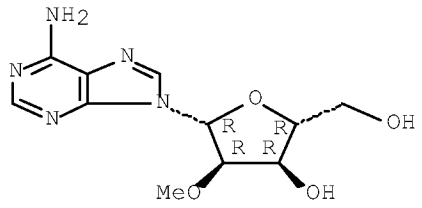
US5965722 SEQID: 25 unclaimed DNA 243936-03-0, PN: US5965722 SEQID: 28 unclaimed DNA 243936-04-1, PN: US5965722 SEQID: 29 unclaimed DNA 243936-05-2, PN: US5965722 SEQID: 30 unclaimed DNA 243936-06-3, PN: US5965722 SEQID: 31 unclaimed DNA 243936-07-4, PN: US5965722 SEQID: 32 unclaimed DNA 243936-08-5, PN: US5965722 SEQID: 33 unclaimed DNA 246038-33-5, PN: US5965722 SEQID: 10 unclaimed DNA 246038-85-7, PN: US5965722 FIGURE: 24a unclaimed DNA
RL: PRP (Properties)
(unclaimed nucleotide sequence; antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages)

IT 149724-35-6 245726-33-4
RL: PRP (Properties)
(unclaimed sequence; antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages)

IT 2140-79-6, 2'-O-Methyladenosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages)

RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



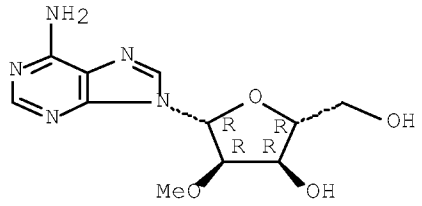
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 362 THERE ARE 362 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:180653 HCAPLUS Full-text
DOCUMENT NUMBER: 130:252594
TITLE: An expeditious synthesis of 3'-α-carboxymethyl-2'-O-methyl ribonucleosides
AUTHOR(S): Von Matt, Peter; Lochmann, Thomas; Kesselring, Rudolf; Altmann, Karl-Heinz
CORPORATE SOURCE: Novartis Pharmaceuticals, Summit, NJ, 07901, USA
SOURCE: Tetrahedron Letters (1999), 40(10), 1873-1876
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB 3'-α-Carboxymethyl-2'-O-Me ribonucleosides, which are important building blocks for the construction of high affinity amide modified antisense oligonucleotides, have been synthesized from the corresponding 2'-O-Me ribonucleosides via catalytic hydrogenation of their 3'-deoxy 3'-methoxycarbonyl-methylidene derivs. Reduction of the olefinic double bond proceeds in good to excellent yields and with α/β-product ratios > 9/1.

CC 33-9 (Carbohydrates)
IT 2140-71-8 2140-79-6 171762-47-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(an expeditious synthesis of carboxymethyl Me ribonucleosides)
IT 2140-79-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(an expeditious synthesis of carboxymethyl Me ribonucleosides)
RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.

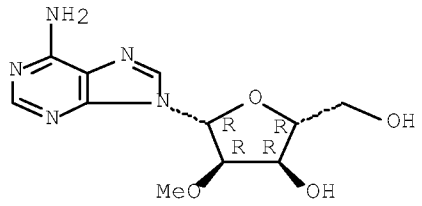


OS.CITING REF COUNT: 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1998:815748 HCAPLUS Full-text
DOCUMENT NUMBER: 130:278152
TITLE: Efficient site-specific cleavage of RNA using a terpyridine-copper(II) complex joined to a 2'-O-methyloligonucleotide by a non-flexible linker
AUTHOR(S): Inoue, Hideo; Furukawa, Takako; Shimizu, Masaki; Tamura, Takashi; Matsui, Miwa; Ohtsuka, Eiko
CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, Hokkaido University, Sapporo, 060-0812, Japan
SOURCE: Chemical Communications (Cambridge) (1999), (1), 45-46
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 130:278152
AB A terpyridine-Cu(II) complex conjugated to an antisense 2'-O-methyloligonucleotide at the 5'-end cleaved RNA predominantly at the site opposite the 5'-end in moderate yield, but the cleavage yield increased by more than two-fold when a 2'-O-methyloligonucleotide was allowed to bind to the single-stranded region of the RNA-antisense complex.
CC 6-2 (General Biochemistry)
IT 958-09-8, 2'-Deoxyadenosine 2140-79-6
RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(efficient site-specific cleavage of RNA using a terpyridine-copper(II) complex joined to a 2'-O-methyloligonucleotide by a non-flexible linker)
IT 2140-79-6
RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or

reagent)
(efficient site-specific cleavage of RNA using a terpyridine-copper(II) complex joined to a 2'-O-methyloligonucleotide by a non-flexible linker)
RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1998:728603 HCAPLUS Full-text
DOCUMENT NUMBER: 130:10615
TITLE: Antisense inhibition of human ras genes with chimeric and alternating oligonucleotides
INVENTOR(S): Ecker, David J.; Cook, Philip Dan; Monia, Brett P.; Freier, Susan M.; Sanghvi, Yogesh S.
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 117 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 326
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9849349	A1	19981105	WO 1998-US8800	19980430
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5965722	A	19991012	US 1997-848840	19970430
AU 9726244	A	19971106	AU 1997-26244	19970624
AU 713740	B2	19991209		
CA 2289454	A1	19981105	CA 1998-2289454	19980430
AU 9875638	A	19981124	AU 1998-75638	19980430
AU 731088	B2	20010322		
EP 981648	A1	20000301	EP 1998-923319	19980430
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

JP 2001500530	T	20010116	JP 1998-547418		19980430
US 6232463	B1	20010515	US 1998-128508		19980804
PRIORITY APPLN. INFO.:			US 1997-848840	A	19970430
			US 1991-801168	B1	19911120
			US 1991-814961	B2	19911224
			US 1992-958134	B2	19921005
			WO 1992-US11339	B1	19921223
			US 1993-7996	B2	19930121
			AU 1993-38025	A3	19930225
			US 1993-39979	B1	19930330
			US 1993-40526	A2	19930331
			US 1993-40903	A3	19930331
			US 1993-40933	B1	19930331
			WO 1993-US9346	B1	19931001
			US 1994-227180	A2	19940413
			US 1994-244993	A2	19940621
			US 1994-300072	A3	19940902
			US 1994-317289	A2	19941003
			US 1994-335046	A2	19941107
			US 1995-411734	A2	19950403
			US 1995-465866	A2	19950606
			US 1995-468037	A2	19950606
			US 1995-488256	A2	19950607
			US 1997-794493	A2	19970204
			US 1997-948151	A1	19971009
			WO 1998-US8800	W	19980430

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Compns. and methods are provided for the modulation of expression of the human H-ras and Ki-ras genes in both the normal and activated forms. Oligonucleotides are provided that have methylene(methylimino) linkages alternating with phosphorothioate or phosphodiester linkages. Further oligonucleotides are provided that have a first region having a methylene(methylimino) linkage alternating with a phosphorothioate or phosphodiester linkage and a second region having phosphorothioate linkages. Such oligonucleotides can be used for diagnostics as well as for research purposes including methods for diagnosis, detection and treatment of conditions arising from the activation of the H-ras gene.

IC ICM C12Q001-68
ICS C12P019-34; C07H019-16; C07H019-167; C07H019-173; C07H019-067; C07H019-06; C07H019-09; C07H021-04; A61K048-00

CC 1-6 (Pharmacology)
Section cross-reference(s): 3, 33

ST antisense oligonucleotide ras gene inhibition

IT Antisense oligonucleotides
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(and chimeras with phosphorothioate and methylene(methylimino) linkages; antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)

IT Antitumor agents
(antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)

IT Phosphorothioate oligodeoxyribonucleotides
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(antisense, and chimeras with methylene(methylimino) and phosphodiester linkages; antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)

IT Gene, animal
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(c-Ha-ras; antisense inhibition of human ras genes with

chimeric and alternating oligonucleotides)
IT Gene, animal
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(c-Ki-ras; antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)
IT Antitumor agents
(carcinoma; antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)
IT Oligodeoxyribonucleotides
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(methylene(methylimino)-linked antisense and chimeras; antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)
IT 149594-04-7, ISIS 2570 149957-05-1 149957-06-2 149957-09-5
149957-10-8 149957-11-9 149957-13-1 149957-14-2, ISIS 2503
151500-77-5 151500-78-6 151500-79-7 151500-80-0 151500-81-1
156988-43-1 157093-13-5 157093-24-8 157093-27-1 157093-28-2
157093-29-3 157093-30-6 157093-31-7 157093-32-8 157093-33-9
165889-42-9 183451-56-1, ISIS 6957 215953-83-6 215953-84-7
215953-86-9 215953-92-7 215953-94-9 215953-95-0 215953-96-1
215953-98-3 215953-99-4 215954-00-0 215954-01-1 215954-02-2
215954-03-3 215954-04-4 215954-05-5 215954-06-6 215954-07-7
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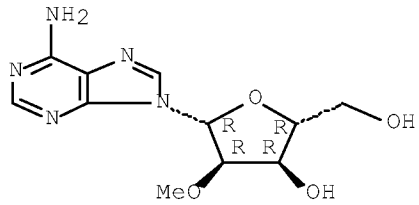
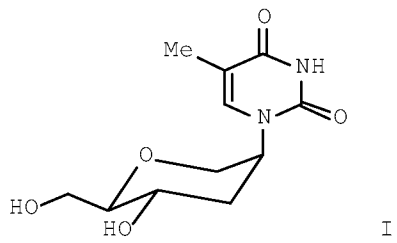
215954-14-6 215954-15-7 216008-65-0 216008-68-3 216008-71-8
216008-72-9 216008-74-1 216008-75-2 216008-76-3 216008-77-4
216008-78-5 216018-66-5 216018-72-3 216067-55-9 216067-56-0
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)
IT 2140-79-6, 2'-O-Methyladenosine 55486-09-4 183737-04-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)
IT 110764-72-2P 153631-19-7P 171176-42-4P,
2'-O-Methyl-5'-O-phthalimido-5-methyluridine 183737-02-2P 183737-06-6P
215670-07-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)
IT 183737-12-4P 183737-38-4P 215670-01-2P 215670-02-3P 215670-03-4P
215670-04-5P 215670-05-6P 215670-06-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)
IT 2140-79-6, 2'-O-Methyladenosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)
RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1995:689497 HCAPLUS Full-text
DOCUMENT NUMBER: 124:30206
ORIGINAL REFERENCE NO.: 124:5807a,5810a
TITLE: 1,5-Anhydrohexitol nucleic acids, a new promising antisense construct
AUTHOR(S): Van Aerschot, Arthur; Verheggen, Ilse; Hendric, Chris; Herdewijn, Piet
CORPORATE SOURCE: Lab. Medicinal Chemistry, Katholieke Univ. Leuven, Louvain, B-3000, Belg.
SOURCE: Angewandte Chemie, International Edition in English (1995), 34(12), 1338-9
CODEN: ACIEAY; ISSN: 0570-0833
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB Anhydrohexitols were incorporated into oligodeoxyribonucleotide duplexes and their thermal stability are reported. Substitution of thymidine by anhydrohexitol I into oligodeoxyribonucleotide gave substantial decrease of melting temperature
CC 33-9 (Carbohydrates)
ST nucleic acid anhydrohexitol antisense; antisense anhydrohexitol oligodeoxyribonucleotide thermal stability; anhydrohexitol incorporation oligodeoxyribonucleotide thermal stability
IT Stability
(thermal; preparation of anhydrohexitol nucleic acids as new promising antisense construct)
IT Nucleotides, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(oligo-, deoxyribo-, preparation of anhydrohexitol nucleic acids as new promising antisense construct)

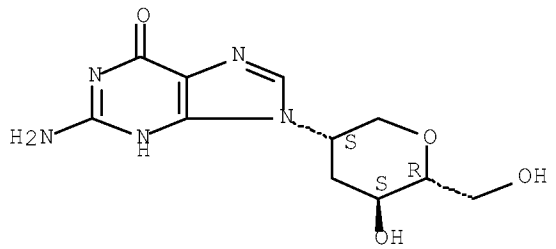
IT 153021-22-8P 171190-10-6P 171190-11-7P 171190-13-9P 171336-42-8P
171658-70-1P 171658-71-2P 171658-72-3P 171658-73-4P 171658-74-5P
171658-75-6P 171658-76-7P 171658-77-8P 171658-78-9P 171658-79-0P
171658-80-3P 171658-81-4P 171658-82-5P 171658-83-6P 171658-84-7P
171658-86-9P 171658-87-0P 171658-88-1P 171658-89-2P 171658-91-6P
171659-04-4P 171716-87-3P 171717-29-6P 171841-40-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of anhydrohexitol nucleic acids as new promising antisense construct)

IT 149312-02-7 149312-05-0 149312-06-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of anhydrohexitol nucleic acids as new promising antisense construct)

IT 149312-06-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of anhydrohexitol nucleic acids as new promising antisense construct)

RN 149312-06-1 HCAPLUS
CN D-arabino-Hexitol, 2-(2-amino-1,6-dihydro-6-oxo-9H-purin-9-yl)-1,5-anhydro-2,3-dideoxy- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



OS.CITING REF COUNT: 62 THERE ARE 62 CAPLUS RECORDS THAT CITE THIS RECORD (62 CITINGS)

L24 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1994:124262 HCAPLUS Full-text
DOCUMENT NUMBER: 120:124262
ORIGINAL REFERENCE NO.: 120:21681a,21684a
TITLE: Hybridization specificity, enzymic activity and biological (Ha-ras) activity of oligonucleotides containing 2,4-dideoxy-β-D-erythro-hexopyranosyl nucleosides
AUTHOR(S): Augustyns, K.; Godard, G.; Hendrix, C.; Van Aerschot, A.; Rozenski, J.; Saison-Behmoaras, T.; Herdewijn, P.
CORPORATE SOURCE: Rega Inst. Med. Res., Kathol. Univ. Leuven, Louvain, F-75231, Belg.
SOURCE: Nucleic Acids Research (1993), 21(20), 4670-6
CODEN: NARHAD; ISSN: 0305-1048
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Antisense oligonucleotides with a 2,4-dideoxyhexopyranosyl nucleotide incorporated at the 3'-end and at a mutation site of the Ha-ras oncogene mRNA were synthesized. Melting temperature studies revealed that an A*-G mismatch is more stable than an A*-T mismatch with these hexopyranosyl nucleotides incorporated at the mutation

site. The oligonucleotides are stable against enzymic degradation RNase H mediated cleavage studies revealed selective cleavage of mutated Ha-ras mRNA. The oligonucleotide containing two pyranose nucleosides at the penultimate position activates RNase H more strongly than natural oligonucleotides. No correlation, however, was found between DNA-DNA or RNA-DNA melting temps. and RNAse H mediated cleavage capacity. Although the A*-G mismatch gives more stable hybridization than the A*-T base pairing, only the oligonucleotides containing an A*-T base pair are recognized by RNase H. This modification is situated 3 base pairs upstream to the cleavage site. Finally, the double pyranose modified oligonucleotide was able to reduce the growth of T24 cells (bladder carcinoma) while the unmodified antisense oligonucleotide was not.

CC 1-6 (Pharmacology)

ST dideoxyerythrohexopyranosyl antisense oligonucleotide antitumor ras inhibition

IT Ribonucleic acids, messenger
RL: BIOL (Biological study)
(for Ha-ras, antisense oligonucleotide cleavage of, antitumor activity in relation to)

IT Neoplasm inhibitors
(bladder carcinoma, antisense oligonucleotide inhibition of)

IT Gene, animal
RL: PROC (Process)
(c-Ha-ras, antisense oligonucleotide for inhibition of)

IT Bladder
(neoplasm, carcinoma, inhibitors, antisense oligonucleotide inhibition of)

IT Molecular structure-biological activity relationship
(neoplasm-inhibiting, of antisense oligonucleotides)

IT Nucleotides, polymers
RL: BIOL (Biological study)
(oligo-, antisense, prepare of, Ha-ras inhibition by)

IT 152789-90-7 153272-79-8 153272-80-1 153272-81-2 153272-82-3 153272-83-4 153272-84-5
RL: BIOL (Biological study)
(antisense oligonucleotide, Ha-ras inhibition by)

IT 152335-69-8
RL: BIOL (Biological study)
(antisense oligonucleotides containing, Ha-ras inhibition by)

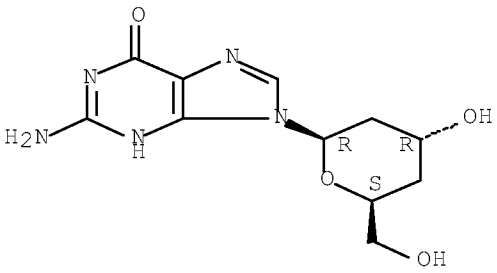
IT 144564-44-3 144564-45-4 144564-46-5 149067-61-8 149067-62-9 149067-63-0 152335-60-9 152335-61-0 152335-62-1 152335-63-2 152335-64-3 152335-65-4 152335-66-5 152335-67-6 152335-68-7
RL: BIOL (Biological study)
(in prepare of dideoxyerythrohexopyranosyl-containing antisense oligonucleotides)

IT 149067-62-9
RL: BIOL (Biological study)
(in prepare of dideoxyerythrohexopyranosyl-containing antisense oligonucleotides)

RN 149067-62-9 HCAPLUS

CN 6H-Purin-6-one, 2-amino-9-(2,4-dideoxy-β-D-erythro-hexopyranosyl)-1,9-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)

=> FILE HCAPLUS
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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

=> D STAT QUE L29
L3 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "GUANOSINE, 2'-DEOXY-6-O-METHYL-"/CN
L5 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "9H-PURINE, 2-AMINO-9-(2-DEOXY-B-D-ERYTHRO-PENTOFURANOSYL)-6-METHOXY-"/CN
L6 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "9H-PURINE, 2-AMINO-9-(2-DEOXY-B-D-RIBOFURANOSYL)-6-METHOXY-"/CN
L7 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "2-AMINO-6-METHOXY-9-(2-DEOXY-B-D-ERYTHRO-PENTOFURANOSYL)PURINE"/CN
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L9 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "6-O-METHYL-2'-DEOXYGUANOSINE"/CN
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L18 535 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L3 OR (L5 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12) OR L16
L19 535 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L16 OR L18
L20 1993 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L19
L28 17731 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON (CPG OR C(W)P(W)G)/BI
L29 3 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L20 AND L28

=> D L29 IBIB ABS HITIND HITSTR 1-3

L29 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2008:640777 HCAPLUS Full-text
DOCUMENT NUMBER: 149:2613
TITLE: Methods for improving fidelity in nucleic acid hybridization assays and PCR
INVENTOR(S): Molloy, Peter Laurence; McCall, Maxine June; Drew, Horace R.
PATENT ASSIGNEE(S): Commonwealth Scientific and Industrial Research Organisation, Australia
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008061311	A2	20080529	WO 2007-AU1797	20071122
WO 2008061311	A3	20081002		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,

MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

AU 2007324273	A1	20080529	AU 2007-324273	20071122
EP 2087133	A2	20090812	EP 2007-815599	20071122

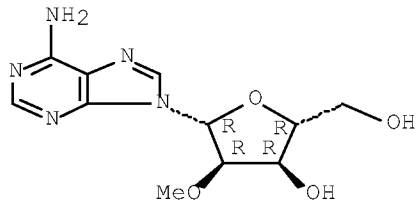
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR

PRIORITY APPLN. INFO.:	AU 2006-906520	A	20061122
	WO 2007-AU1797	W	20071122

AB The present invention provides methods for improving fidelity in nucleic acid hybridization assays and PCR. In particular, the invention provides methods for reducing mispairing in hybridization between sample DNA and an oligonucleotide. The invention therefore finds application, inter alia, in microarray DNA anal., for example in DNA methylation anal., and in the detection of point mutations and single nucleotide polymorphisms. The method for reducing nucleotide mispairing in hybridization between a probe oligonucleotide and a target DNA comprises providing at least one oligonucleotide probe of about 7 to about 25 nucleotides, providing a sample comprising amplified DNA of a target region, wherein the amplified DNA is prepared so as to comprise fragments of up to about 100 bases, incubating the amplified DNA with the at least one oligonucleotide probe under conditions suitable to enable hybridization between probe and target DNA, removing unbound amplified DNA and detecting DNA hybridized to the at least one oligonucleotide probe wherein either or both of the amplified DNA and the at least one oligonucleotide probe comprises one or more modified nucleotides, and wherein the DNA of the sample is optionally labeled with a detectable moiety. The oligonucleotide probe comprises one or more universal bases or a mixture of normal or modified nucleotides at one or both ends to increase the melting temperature of oligonucleotide-target double-helixes. At least one oligonucleotide probe and the DNA of the sample comprise modified nucleotides. The modified nucleotides are selected from the group consisting of 2'-O-Me nucleotides, 2-aminoadenine, 2-aminopurine, inosine, propynyl nucleotides, 2-thiothymidine, universal bases, locked nucleic acid (LNA), and peptide nucleic acid (PNA). The 2'-O-Me nucleotides are selected from 2'-O-methyladenosine, 2'-O-methyluridine, 2'-O-methylthymidine, 2'-O-methylcytidine, 2'-O-methylguanosine, 2'-O-methyl-2-aminoadenosine. The propynyl nucleotides are selected from 5-propynyl uracil and 5-propynylcytosine. The universal base is 5-nitroindole. A method of oligonucleotide array-based anal. of DNA comprises providing a sample comprising target DNA, amplifying a DNA region comprising target DNA, wherein the amplified DNA is prepared so as to comprise fragments of up to about 100 bases, incubating amplified DNA with one or more oligonucleotide probes of about 7 to about 25 nucleotides immobilized and arrayed on a solid support under conditions to allow hybridization between fragmented DNA and probes, washing the oligonucleotides to remove unbound amplified DNA and detecting DNA hybridized to the oligonucleotide probes, wherein either or both of the amplified DNA and the at least one oligonucleotide probe comprises one or more modified nucleotides, and wherein the DNA of the sample is optionally labeled with a detectable moiety. The method of oligonucleotide array-based anal. of DNA methylation comprises providing a sample comprising target DNA, treating the sample with bisulfite to convert unmethylated cytosine bases to uracil, amplifying a DNA region comprising target DNA, wherein the amplified DNA is prepared so as to comprise fragments of up to about 100 bases, incubating amplified DNA with one or more oligonucleotide probes of about 7 to about 25 nucleotides immobilized and arrayed on a solid support under conditions to allow hybridization between fragmented DNA and probes, washing the oligonucleotides to remove unbound amplified DNA, detecting DNA hybridized to the oligonucleotide probes, wherein either or both of the amplified DNA and the at least one oligonucleotide probe comprises one or more modified nucleotides, and wherein the DNA of the sample is optionally labeled with a detectable moiety.

IC ICM C12N
CC 3-1 (Biochemical Genetics)
IT Genetic element
RL: ANT (Analyte); ANST (Analytical study)
(CpG island, detection of; methods for improving fidelity in nucleic acid hybridization assays and PCR)
IT 58-63-9, Inosine 452-06-2, 2-Aminopurine 1904-98-9, 2-Aminoadenine 2140-71-8 2140-72-9, 2'-O-Methylcytidine 2140-76-3, 2'-o-Methyl uridine 2140-79-6, 2'-O-Methyl adenosine 28585-51-5 55486-09-4 80791-87-3 134700-29-1, 5-Propynyl uracil 151091-68-8, 5-Propynylcytosine
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleotide probe comprising; methods for improving fidelity in nucleic acid hybridization assays and PCR)
IT 2140-79-6, 2'-O-Methyl adenosine
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oligonucleotide probe comprising; methods for improving fidelity in nucleic acid hybridization assays and PCR)
RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2008:526538 HCAPLUS Full-text
DOCUMENT NUMBER: 148:488268
TITLE: Methods and negative control probes for use as spiking reagents in analysis of DNA methylation in diagnostic applications
INVENTOR(S): Roberts, Douglas N.; Milligan, Stephen B.
PATENT ASSIGNEE(S): Agilent Technologies, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 44 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080102452	A1	20080501	US 2006-590711	20061031
PRIORITY APPLN. INFO.:			US 2006-590711	20061031

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB There is a need for exogenous nucleic acid controls (spikes) for anal. of DNA methylation using various anal. systems, including microarrays. Variations in sample preparation, hybridization conditions, and array quality can influence the anal.

The use of quality-assured control polynucleotides during sample preparation and anal. can enhance the ability to normalize data and to compare expts., as well as to monitor each step of the assay. The present invention provides control nucleic acid constructs useful as spiking reagents in DNA methylation anal. A control nucleic acid construct comprises a nucleic acid vector comprising one or more inserted sequences. An insert comprises a sequence complementary to a neg. control sequence of a microarray. The insert comprises a methyltransferase recognition site. In some embodiments, the insert comprises a methylated methyltransferase recognition site. Non-limiting examples of a methyltransferase recognition site include CpG, CpA, CpT, CpNpG, ApG, GpG, CCGG, GGCC, and TCGA. Non-limiting examples of a methylation site include 5-methylcytidine, 6-methyladenosine, and 7-methylguanosine. The length of a control nucleic acid construct can range in size from about 1 kilobases [kb] to about 100 kb. The length of an inserted sequence can be in the range of about 5 to about 1000 bases. In some embodiments, an insert has a length of 60 bases. In some aspects, there are provided methods for assessing methylation status of a sample. In some embodiments, the methods comprise adding a control nucleic acid construct to said sample, said construct comprising a nucleic acid vector comprising an insert comprising a sequence complementary to a neg. control sequence, wherein said insert comprises a methylation site, enriching said sample for nucleic acids comprising a methylated methylation site and detecting nucleic acids to assess the methylation status of said sample. In some embodiments, the enrichment step can comprise immunopptn. of nucleic acids comprising a methylated methylation site. The methods can include fragmentation steps, amplification steps, and labeling steps. The detecting can comprise various methods using PCR, blots or arrays. These methods can also be used in detection of changes in nucleic acid methylation in a patient.

INCL 435006000; 536024300

CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 14

ST nucleic acid methylation CpG island analysis neg control oligonucleotide; diagnosis disease DNA methylation spiking neg control probe

IT Genetic element
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(CpG island; methods and neg. control probes for use as spiking reagents in anal. of DNA methylation in diagnostic applications)

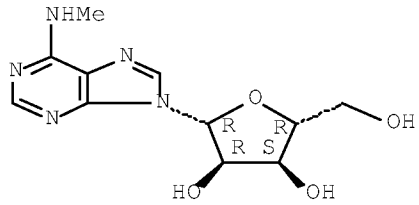
IT 1867-73-8, 6-Methyladenosine 2140-61-6, 5-Methylcytidine 2382-65-2 2382-66-3 3352-23-6 3353-33-1 17681-18-4 20244-86-4, 7-Methylguanosine 55048-62-9 56399-78-1
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods and neg. control probes for use as spiking reagents in anal. of DNA methylation in diagnostic applications)

IT 1867-73-8, 6-Methyladenosine
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods and neg. control probes for use as spiking reagents in anal. of DNA methylation in diagnostic applications)

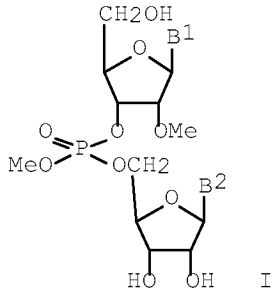
RN 1867-73-8 HCAPLUS

CN Adenosine, N-methyl- (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1991:559610 HCAPLUS Full-text
DOCUMENT NUMBER: 115:159610
ORIGINAL REFERENCE NO.: 115:27347a,27350a
TITLE: Synthesis and conformational analysis of phosphate-methylated RNA dinucleotides
AUTHOR(S): Quaedflieg, Peter J. L. M.; Van der Heiden, Arthur P.; Koole, Leo H.; Coenen, Annie J. J. M.; Van der Wal, Sjoerd; Meijer, Emmo M.
CORPORATE SOURCE: Dep. Org. Chem., Eindhoven Univ. Technol., Eindhoven, 5600 MB, Neth.
SOURCE: Journal of Organic Chemistry (1991), 56(20), 5846-59
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 115:159610
GI



AB Synthesis of RNA dimers having a Me phosphotriester group as the internucleoside linkage is reported; six pairs of diastereoisomerically pure systems were prepared, i.e., r(CpU) (I; B1 = 1-cytidyl, B2 = 1-uradyl), r(apU) (I; B1 = 9-adenyl, B2 = 1-uradyl), r(CpC) (I; B1 = B2 = 1-cytidyl), r(ApC) (I: B1 = 9-adenyl, B2 = 1-cytidyl), r(CpG) (I; B1 = 1-cytidyl, B2 = 9-cumyl), and r(ApG) (I: B1 = 9-adenyl, B2 = 9-guanyl). I are stabilized by a 2'-O-Me group in the 5'-terminal residue. The present systems represent the third class of backbone-modified RNA oligomers, following the 2'-O-methylribonucleotide phosphorothioates and the 2'-O-methylribonucleotide Me phosphonates. Our synthetic approach comprises the use of 9-fluorenylmethoxycarbonyl (Fmoc) groups for transient protection of the exocyclic NH2 groups of the bases A, C, and G, levulinoyl (Lev) groups for the transient protection of the 2'- and 3'-OH groups of the 3'-terminal residues, methanolic K2CO3 for the simultaneous removal of Fmoc and Lev groups with full preservation of the Me phosphotriester function, and finally reversed-phase HPLC separation of the SPand

RPdiastereoisomers. The availability of the six dimers in diastereoisomerically pure form enabled us to examine the mol. conformations using high-field NMR and CD (CD) spectroscopy. These studies led to the following conclusions. (I) NMR J-coupling anal.: the central C4'-C5' (γ) and C5'-O5' (β) bonds in I show less preference for the γ+ and βt rotamers, in comparison with their natural analogs, i.e., base stacking is diminished upon introduction of the two Me groups on O2' and on the phosphate group. (Ii) CD anal.: I show substantially reduced mol. ellipticities if compared to the natural counterparts, which also reveals that base stacking is reduced. (Iii) UV and variable-temperature 1H-NMR measurements: (SP)- and (RP)-I (B1 = 1-cytidyl, B2 = 9-guanyl) show self-association, via the formation of a right-handed miniduplex with two C-G base pairs (SP)-I (B1 = 1-cytidyl, B2 = 9-guanyl), Tm = 9.3°, concn = 36.6 μM; (RP)-I (b1 = 1-cytidyl, B2 = 9-guanyl), Tm = 8.7°, concn = 48.1 μM. The present conformational data on (RP)- and (SP)-I are in agreement with literature data on other phosphate-triesterified oligonucleotides, e.g., the trimer d(TPOEtGPOEtG) and the tetramer d(TPOEtTPOEtCPOEtA). While the latter systems also showed little base-base stacking, it was established that they readily form a local duplex with a complementary natural RNA sequence. Hence it is anticipated that phosphate-methylated 2'-O-methyl-RNA oligomers, longer than the dimer systems described in the present work, will also hybridize easily with complementary natural RNA.

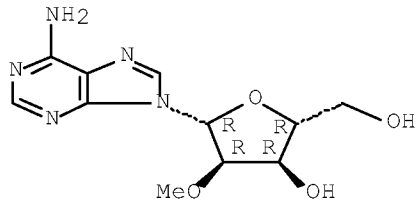
CC 33-9 (Carbohydrates)
Section cross-reference(s): 22

IT 2140-72-9P 2140-79-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and N-acylation of, with fluorenylmethoxycarbonyl chloride)

IT 2140-79-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and N-acylation of, with fluorenylmethoxycarbonyl chloride)

RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

=> FILE HCAPLUS
FILE 'HCAPLUS' ENTERED AT 16:37:58 ON 20 APR 2010
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

=> D STAT QUE L35
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L6 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "9H-PURINE, 2-AMINO-9-(2-DEOXY-B-D-RIBOFURANOSYL)-6-METHOXY-"/CN
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L12 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON "O6-METHYLDEOXYGUANOSINE"/CN
L16 535 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON C11H15N5O4/MF
L18 535 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L3 OR (L5 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12) OR L16
L19 535 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L16 OR L18
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L25 151460 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON OLIGONUCLEOTIDES+OLD,NT,PFT/CT OR (OLIGONUCLEOTIDE? OR OLIGO(W)NUCLEOTIDE?)/BI
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L35 31 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L27 AND (PRY<=2003 OR AY<=2003 OR PY<=2003 OR PD<=2003)

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L35 ANSWER 1 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:951160 HCAPLUS Full-text
DOCUMENT NUMBER: 140:13688
TITLE: Oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers, or when hybridized to RNA, as substrates for RNA cleaving enzymes
INVENTOR(S): Eldrup, Anne; Cook, Phillip Dan; Parshall, Lynne B.
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 161 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003100017	A2	20031204	WO 2003-US16526	20030523 <--

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             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2003241621         A1    20031212    AU 2003-241621          20030523 <--
     US 20040014108        A1    20040122    US 2003-444298          20030523 <--
PRIORITY APPLN. INFO.:                       US 2002-383358P     P   20020524 <--
                                             WO 2003-US16526     W   20030523 <--
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S):          MARPAT 140:13688
AB    Disclosed are oligonucleotides that include one or more modified nucleoside units.
      The examples present the representative preparation of modified nucleosides and
      nucleoside amidites, for incorporation into said oligonucleotides.  The
      oligonucleotides are particularly useful as antisense agents, ribozymes aptamer,
      siRNA agents, probes and primers or, when hybridized to an RNA, as a substrate for
      RNA cleaving enzymes including Rnase H and dsRNase.
IC    ICM  C12N
CC    3-1 (Biochemical Genetics)
      Section cross-reference(s): 33
IT    27175-64-0P, Lutidine   37105-93-4P   104579-03-5P   163759-49-7P
      163759-50-0P   168427-35-8P   171763-19-2P   176755-83-2P   212061-24-0P
      212061-25-1P   212061-26-2P   212061-27-3P   212061-28-4P   212061-29-5P
      251647-49-1P   253145-84-5P   253145-85-6P   443642-30-6P   443642-31-7P
      443642-32-8P   443642-33-9P   443642-35-1P   443642-36-2P   443642-37-3P
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      443642-71-5P   443642-72-6P   443642-73-7P   443642-77-1P   443642-78-2P
      443642-79-3P   443642-81-7P   443642-82-8P   443642-84-0P   443642-85-1P
      443643-38-7P   444019-99-2P   444020-01-3P   582313-25-5P
      629670-26-4P   629670-27-5P
      RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
      (Reactant or reagent)
         (preparation of modified nucleosides and nucleoside amidites for
         incorporation into oligonucleotides, and uses)
IT    444019-99-2P
      RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
      (Reactant or reagent)
         (preparation of modified nucleosides and nucleoside amidites for
         incorporation into oligonucleotides, and uses)
RN    444019-99-2  HCAPLUS
CN    1H-Pyrazolo[3,4-d]pyrimidin-4-amine,
      1-(2-C-methyl-β-D-ribofuranosyl)-  (CA INDEX NAME)

Absolute stereochemistry.
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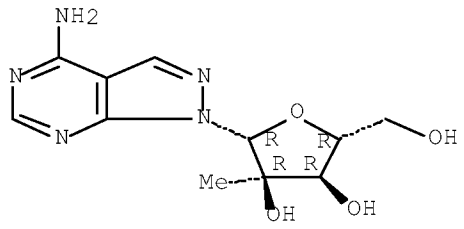


OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

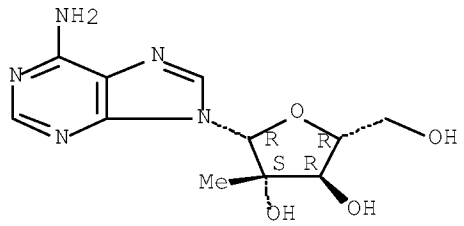
L35 ANSWER 2 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:951042 HCAPLUS Full-text
DOCUMENT NUMBER: 140:24085
TITLE: Oligonucleotides having modified nucleoside units with various linkages, and their uses as antisense agents, ribozymes, aptamers, siRNA, probes, and primers, or when hybridized to RNA, as substrates for RNA cleaving enzymes
INVENTOR(S): Eldrup, Anne; Cook, Phillip Dan; Parshall, B. Lynne
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 271 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2003099840	A1	20031204	WO 2003-US16502		20030523 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
AU 2003237249	A1	20031212	AU 2003-237249		20030523 <--
US 20040014957	A1	20040122	US 2003-444628		20030523 <--
PRIORITY APPLN. INFO.:			US 2002-383438P	P	20020524 <--
			WO 2003-US16502	W	20030523 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 140:24085
AB Disclosed are oligonucleotides that include one or more modified nucleoside units. The examples present the representative preparation of modified nucleosides and nucleoside amidites, for incorporation into said oligonucleotides. The oligonucleotides are particularly useful as antisense agents, ribozymes aptamer, siRNA agents, probes and primers or, when hybridized to an RNA, as a substrate for RNA cleaving enzymes including Rnase H and dsRNase.
IC ICM C07H021-04

ICS A61K031-70
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 33
IT 13039-47-9P 105931-57-5P 136208-63-4P 160527-01-5P 163759-49-7P
163759-94-2P 212061-28-4P 212061-29-5P 212061-30-8P 251647-53-7P
251647-55-9P 253145-86-7P 278188-65-1P 317820-43-2P 443642-29-3P
443642-34-0P 443642-38-4P 443642-41-9P 443642-45-3P 443642-46-4P
443642-47-5P 443642-48-6P 443642-49-7P 443642-53-3P 443642-56-6P
443642-57-7P 443642-60-2P 443642-63-5P 443642-74-8P 443642-80-6P
444018-74-0P 444018-76-2P 444018-77-3P 444018-79-5P 444018-81-9P
444018-85-3P 444018-88-6P 444018-90-0P 444018-92-2P 444018-96-6P
444018-99-9P 444019-03-8P 444019-05-0P 444019-30-1P 444019-39-0P
444020-62-6P 444020-66-0P 444020-74-0P 444020-75-1P 444020-76-2P
444020-79-5P 444020-82-0P 632367-90-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(oligonucleotides having modified nucleoside units with
various linkages)
IT 632367-90-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(oligonucleotides having modified nucleoside units with
various linkages)
RN 632367-90-9 HCAPLUS
CN 9H-Purin-6-amine, 9-(2-C-methyl-β-D-arabinofuranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 3 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:802801 HCAPLUS Full-text
DOCUMENT NUMBER: 140:37560
TITLE: 8-Methylguanosine: A Powerful Z-DNA Stabilizer
AUTHOR(S): Xu, Yan; Ikeda, Reiko; Sugiyama, Hiroshi
CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo, 101-0062, Japan
SOURCE: Journal of the American Chemical Society (2003), 125(44), 13519-13524
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:37560
AB Various modified guanine derivs. were synthesized and introduced into G4 of d(CGCGCG)2 to evaluate their capacity to stabilize Z-form DNA. It was found that

the incorporation of 8-methylguanosine (m8rG) in oligonucleotides stabilizes the Z form more dramatically than does the incorporation of 8-methyl-2'-deoxyguanosine (m8G). This enhancement is ascribed to a reduction in the entropic penalty, which arises from the introduction of hydrophilic groups in solvent-exposed regions. The incorporation of m8rG into DNA sequences markedly stabilizes the Z form even in the absence of NaCl. The Z-DNA stabilizer allows oligonucleotides with a wide range of sequences to be converted to the Z form. It could be a powerful tool for examining the mol. basis of many types of Z-form-specific reactions at the mol. level under physiol. salt conditions.

CC 6-2 (General Biochemistry)

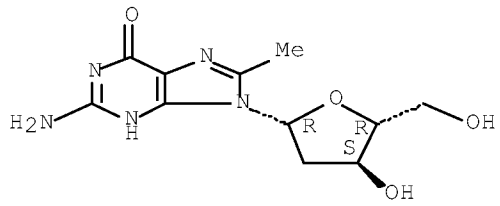
IT 85819-69-8D, oligonucleotides containing 634612-50-3D, oligonucleotides containing
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(8-methylguanosine is a powerful Z-DNA stabilizer)

IT 85819-69-8D, oligonucleotides containing
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(8-methylguanosine is a powerful Z-DNA stabilizer)

RN 85819-69-8 HCAPLUS

CN Guanosine, 2'-deoxy-8-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 4 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2003:714357 HCAPLUS Full-text

DOCUMENT NUMBER: 140:271104

TITLE: Chemical Incorporation of 1-Methyladenosine, Minor tRNA Component, into Oligonucleotides

AUTHOR(S): Efimtseva, E. V.; Mikhailov, S. N.; Rozenski, J.; Busson, R.; Van Aerschot, A.; Herdewijn, P.

CORPORATE SOURCE: Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, Moscow, 119991, Russia

SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2003), 22(5-8), 1113-1115
CODEN: NNNAFY; ISSN: 1525-7770

PUBLISHER: Marcel Dekker, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

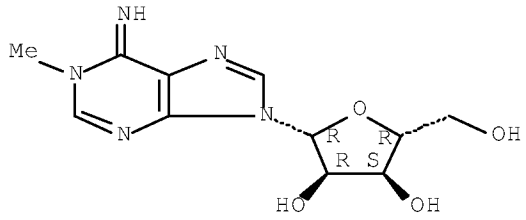
OTHER SOURCE(S): CASREACT 140:271104

AB The synthesis of suitably protected 1-methyladenosine derivs. has been developed and its successful chemical incorporation into oligonucleotides was achieved.

CC 33-9 (Carbohydrates)
Section cross-reference(s): 6

IT 15763-06-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(chemical incorporation of 1-methyladenosine, minor tRNA component into oligonucleotides)
IT 15763-06-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(chemical incorporation of 1-methyladenosine, minor tRNA component into oligonucleotides)
RN 15763-06-1 HCAPLUS
CN Adenosine, 1-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 5 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:301442 HCAPLUS Full-text
DOCUMENT NUMBER: 139:53244
TITLE: Synthesis of Antisense Oligonucleotides Carrying Modified 2-5A Molecules at Their 5'-Termini and Their Properties
AUTHOR(S): Ueno, Yoshihito; Kato, Yoichiro; Okatani, Shusaku; Ishida, Norihisa; Nakanishi, Masayuki; Kitade, Yukio
CORPORATE SOURCE: Department of Biomolecular Science, Faculty of Engineering, Gifu University, Gifu, 501-1193, Japan
SOURCE: Bioconjugate Chemistry (2003), 14(3), 690-696
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:53244
AB The synthesis of 8-methyladenosine-substituted 2-5A tetramers with hydroxyalkyl groups at the 5'-phosphates and the corresponding 2-5A-antisense chimeras is described. These oligonucleotides were synthesized by the phosphoramidite method with a DNA/RNA synthesizer. These 2-5A tetramers with hydroxyethyl and hydroxybutyl groups at their 5'-phosphates were more resistant to hydrolysis by alkaline phosphatase than those without the hydroxyalkyl groups. Incorporation of the hydroxyethyl group into the 2-5A tetramer and 2-5A-antisense chimera slightly reduced the abilities of their analogs to activate recombinant human RNase L, but the abilities of the 2-5A tetramer and the 2-5A-antisense chimera both with the hydroxyethyl group and 8-methyladenosine returned to 80 and 50% relative to those of the oligonucleotides without the hydroxyethyl group and 8-methyladenosine, resp. Furthermore, the enzyme activated by 8-methyladenosine-substituted 2-5A-antisense chimera with the hydroxyethyl group cleaved the complementary RNA as efficiently as that activated by 2-5A-antisense chimera without the hydroxyethyl group and 8-

methyladenosine. Thus, the 2-5A-antisense chimera carrying the hydroxyethyl group and 8-methyladenosine will be a candidate for a novel antisense mol.

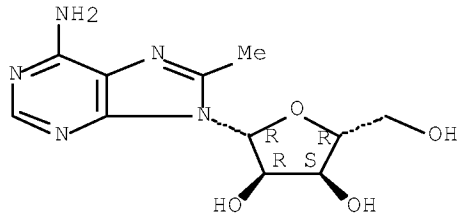
CC 33-10 (Carbohydrates)
Section cross-reference(s): 6, 7

IT 56973-12-7 161029-24-9 225786-84-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)

IT 56973-12-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of antisense oligonucleotides carrying 8-methyladenosine-modified mols. at their termini and their enzymic hydrolysis resistance)

RN 56973-12-7 HCAPLUS
CN Adenosine, 8-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 6 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2002:832909 HCAPLUS Full-text
DOCUMENT NUMBER: 137:348832
TITLE: Mass spectrometric analysis of nucleic acids using oligonucleotides modified with mass labels
INVENTOR(S): Grosveld, Frank
PATENT ASSIGNEE(S): Erasmus Universiteit Rotterdam, Neth.
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002086051	A2	20021031	WO 2002-IB2298	20020424 <--
WO 2002086051	A3	20031120		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,

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            GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
            GN, GQ, GW, ML, MR, NE, SN, TD, TG
     CA 2445248          A1    20021031    CA 2002-2445248        20020424 <--
     AU 2002309185       A1    20021105    AU 2002-309185         20020424 <--
     EP 1385932          A2    20040204    EP 2002-735871         20020424 <--
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     JP 2005500824       T     20050113    JP 2002-583567         20020424 <--
     BR 2002009205       A     20051213    BR 2002-9205           20020424 <--
     US 20040137570      A1    20040715    US 2003-693308         20031024 <--
PRIORITY APPLN. INFO.:                      GB 2001-10030       A  20010424 <--
                                            GB 2001-10029       A  20010424 <--
                                            WO 2002-IB2298      W  20020424 <--
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AB The present invention relates to nucleic acid anal. and in particular, but not exclusively, computational aspects of nucleic acid anal. The present invention provides a method for constructing a set, or repertoire, of sequence-specific binding mols. which are differentiable by mass. According to an aspect of the present invention, there is provided a method for constructing a repertoire of oligomers differentiable by mass, comprising: (a) providing a heterogeneous pool of monomers, wherein said monomers are modified by addition of one or more of a selection of mass labels; (b) optionally, providing a heterogeneous pool of unlabeled monomers; (c) determining the monomer sequences of the oligomers to be represented in the repertoire and calculating the number and nature of the mass labels to be incorporated into each monomer such that each oligomer differs in mass; and (d) assembling a plurality of labeled monomers and, optionally, one or more unlabeled monomers, to form the oligomers. The repertoire is constructed so that each oligomer with a different sequence has a different mass characteristic. The members of the repertoire which hybridized to the nucleic acid can then be identified by a mass anal. In another aspect, the invention provides a method for analyzing nucleic acid in a biol. sample, comprising the steps of: (a) immobilizing the nucleic acid (s) in the sample onto a solid support; (b) hybridizing to the nucleic acid (s) at a desired stringency a repertoire of oligonucleotides, and eluting those members of the repertoire which do not hybridize at the desired stringency; (c) eluting the repertoire members hybridized in step (b) and analyzing said members to resolve their mass. A powerful technique to detect and quantify nucleic acid sequences based on the identification of oligomers according to their mass is provided. The technique does not suffer from the disadvantages associated with 32P-labeling or forming biotinylated or fluorescein-conjugated probes and when coupled with a mass spectrometric anal. gives rapid, precise and unambiguous results.

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IC   ICM  C12G
CC   9-16 (Biochemical Methods)
     Section cross-reference(s): 3
IT   50-89-5D, DT, conjugates with biotin   50-91-9   54-42-2   59-14-3
     73-03-0, Cordycepin   452-06-2, 2-Aminopurine   611-53-0   838-07-3
     890-38-0   951-78-0   964-21-6   1022-79-3   2002-35-9
     3881-21-8   4097-22-7   4546-68-3, 2'-Deoxynebularine   5930-94-9,
     3-Nitropyrrole   6146-52-7, 5-Nitroindole   7236-57-9   7481-89-2
     10356-76-0   13389-03-2   14985-44-5   16096-32-5, 4-Methylindole
     28585-51-5   50591-13-4   60129-59-1   62471-63-0   86392-75-8
     88847-89-6, 8-Oxo dG   109389-24-4   109389-25-5   113886-70-7
     114485-36-8   126128-42-5   179817-95-9   179817-96-0
     RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
        (oligonucleotide base modification with; mass spectrometric
        anal. of nucleic acids using oligonucleotides modified with
        mass labels)
IT   964-21-6
     RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
        (oligonucleotide base modification with; mass spectrometric
        anal. of nucleic acids using oligonucleotides modified with
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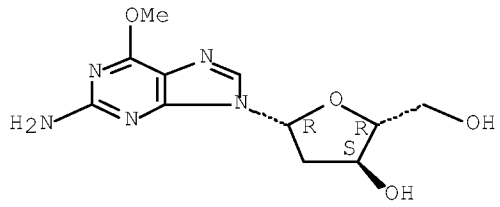
mass labels)
RN 964-21-6 HCAPLUS
CN Guanosine, 2'-deoxy-6-O-methyl- (CA INDEX NAME)

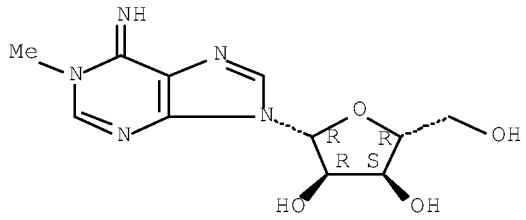
Absolute stereochemistry.



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

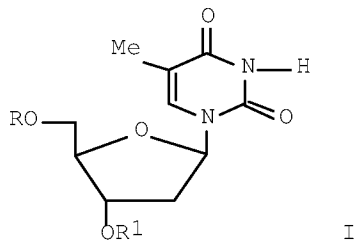
L35 ANSWER 7 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2002:774969 HCAPLUS Full-text
DOCUMENT NUMBER: 138:153766
TITLE: Protection of 1-methyladenosine and its chemical incorporation into oligonucleotides
AUTHOR(S): Ehmtseva, Ekaterina V.; Mikhailov, Sergey N.; Rozenski, Jef; Busson, Roger; Van Aerschot, Arthur; Herdewijn, Piet
CORPORATE SOURCE: Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, Moscow, 119991, Russia
SOURCE: Collection Symposium Series (2002), 5(Chemistry of Nucleic Acid Components), 195-199
CODEN: CSYSFN
PUBLISHER: Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A symposium on the synthesis of a suitably protected 1-methyladenosine derivative and its successful chemical incorporation into oligonucleotides. The modification destabilizes a duplex but improves the stability of a hairpin when incorporated in the loop.
CC 33-10 (Carbohydrates)
IT 15763-06-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(protection of 1-methyladenosine and its chemical incorporation into DNA hairpin oligonucleotides)
IT 15763-06-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(protection of 1-methyladenosine and its chemical incorporation into DNA hairpin oligonucleotides)
RN 15763-06-1 HCAPLUS
CN Adenosine, 1-methyl- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 8 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2002:354570 HCAPLUS Full-text
DOCUMENT NUMBER: 137:79170
TITLE: Building Blocks for the Solution Phase Synthesis of Oligonucleotides: Regioselective Hydrolysis of 3',5'-Di-O-levulinylnucleosides Using an Enzymatic Approach
AUTHOR(S): Garcia, Javier; Fernandez, Susana; Ferrero, Miguel; Sanghvi, Yogesh S.; Gotor, Vicente
CORPORATE SOURCE: Departamento de Quimica Organica e Inorganica Facultad de Quimica, Universidad de Oviedo, Oviedo, 33071, Spain
SOURCE: Journal of Organic Chemistry (2002), 67(13), 4513-4519
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:79170
GI



I

AB A short and convenient synthesis of 3'- and 5'-O-levulinyl-2'-deoxynucleosides has been developed from the corresponding 3',5'-di-O-levulinyl derivs. by regioselective enzymic hydrolysis, avoiding several tedious chemical protection/deprotection steps. Thus, Candida antarctica lipase B (CAL-B) was found to selectively hydrolyze the 5'-levulinate esters, furnishing 3'-O-levulinyl-2'-deoxynucleosides, e.g. I (R = OH, R1 = Lev), in >80% isolated yields. On the other hand, immobilized Pseudomonas cepacia lipase (PSL-C) and Candida antarctica lipase A (CAL-A) exhibit the opposite selectivity toward the hydrolysis at the 3'-position, affording 5'-O-levulinyl derivs., e.g. I (R = Lev, R1 = OH), in >70% yields. A similar hydrolysis procedure was successfully extended to the synthesis of 3'- and 5'-O-levulinyl-protected 2'-O-alkylribonucleosides. This work demonstrates for the first time application of com.

CAL-B and PSL-C toward regioselective hydrolysis of levulinyl esters with excellent selectivity and yields. It is noteworthy that protected cytidine and adenosine base derivs. were not adequate substrates for the enzymic hydrolysis with CAL-B, whereas PSL-C was able to accommodate protected bases during selective hydrolysis. In addition, we report an improved synthesis of dilevulinyl esters using a polymer-bound carbodiimide as a replacement for dicyclohexylcarbodiimide (DCC), thus considerably simplifying the workup for esterification reactions.

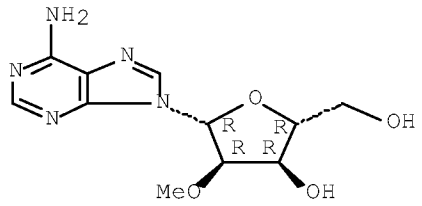
CC 33-9 (Carbohydrates)
Section cross-reference(s): 7, 9

IT 50-89-5, Thymidine, reactions 951-77-9, 2'-Deoxycytidine 958-09-8, 2'-Deoxyadenosine 961-07-9, 2'-Deoxyguanosine 2140-79-6 4546-72-9 4836-13-9 68892-42-2 163759-49-7 168427-74-5 244105-55-3 333335-93-6 340162-93-8 440327-50-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(regioselective enzymic hydrolysis of 3',5'-di-O-levulinylnucleosides as building blocks for the solution phase synthesis of oligonucleotides)

IT 2140-79-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(regioselective enzymic hydrolysis of 3',5'-di-O-levulinylnucleosides as building blocks for the solution phase synthesis of oligonucleotides)

RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 22 THERE ARE 22 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 9 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:828760 HCAPLUS Full-text
DOCUMENT NUMBER: 136:146684
TITLE: Methylation of the nucleobases in RNA oligonucleotides mediates duplex-hairpin conversion
AUTHOR(S): Micura, Ronald; Pils, Werner; Hobartner, Claudia; Grubmayr, Karl; Ebert, Marc-Olivier; Jaun, Bernhard
CORPORATE SOURCE: Institut fur Organische Chemie, Leopold Franzens Universitat, Innsbruck, A-6020, Austria
SOURCE: Nucleic Acids Research (2001), 29(19), 3997-4005
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We have systematically investigated the duplex to hairpin conversion of oligoribonucleotides under the aspect of nucleobase methylation. The first part of

our study refers to the self-complementary sequence rCGCGAAUUCGCGA, which forms a stable Watson-Crick base paired duplex under various buffer conditions. It is shown that this sequence is forced to adopt a hairpin conformation if one of the central 6 nt is replaced by the corresponding methylated nucleotide, such as 1-methylguanosine N2,N2-dimethylguanosine, N6,N6-dimethyladenosine (m63A) or 3-methyluridine. On the other hand, the duplex structure is retained and even stabilized by replacement of a central nucleotide with N2-methylguanosine (m2G) or N4methylcytidine. A borderline case is represented by N6-methyladenosine (m6A). Although generally a duplex-preserving modification, our data indicate that m6A in specific strand positions and at low strand concns. is able to effect duplex-hairpin conversion. Our studies also include the ssu ribosomal helix 45 sequence motif, rGACCm2GGm62Am62AGGUC. By analogy, it is demonstrated that the tandem m62A nucleobases of this oligoribonucleotide prevent duplex formation with complementary strands. Therefore, it can be concluded that nucleobase methylations at the Watson-Crick base pairing site provide the potential not only to modulate but to substantially affect RNA structure by formation of different secondary structure motifs.

CC 6-2 (General Biochemistry)

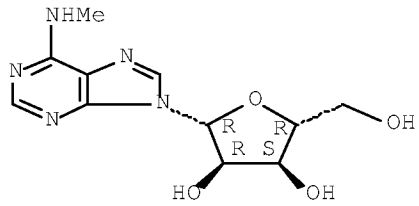
IT 1867-73-8 2140-65-0, 1-Methylguanosine 2140-67-2, N2,N2-Dimethylguanosine 2140-69-4, 3-Methyluridine 2140-73-0, 1-Methylinosine 2140-77-4 2620-62-4 10578-79-7, N4-Methylcytidine
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(nucleobase methylation in RNA oligonucleotides mediates duplex-hairpin conversion)

IT 1867-73-8
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(nucleobase methylation in RNA oligonucleotides mediates duplex-hairpin conversion)

RN 1867-73-8 HCAPLUS

CN Adenosine, N-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 22 THERE ARE 22 CAPLUS RECORDS THAT CITE THIS RECORD (22 CITINGS)

REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 10 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2000:182368 HCAPLUS Full-text

DOCUMENT NUMBER: 132:347832

TITLE: Nucleic acid related compounds. 112. Synthesis of amide-linked [(3')CH2CO-NH(5')] nucleoside analogs of small oligonucleotides

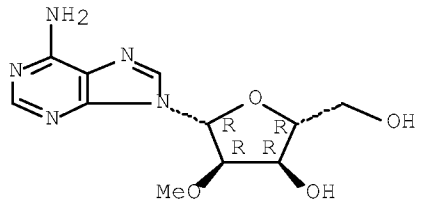
AUTHOR(S): Robins, Morris J.; Doboszewski, Bogdan; Nilsson, Bradley L.; Peterson, Matt A.

CORPORATE SOURCE: Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT, 84602-5700, USA

SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2000), 19(1 & 2), 69-86

CODEN: NNNAFY; ISSN: 1525-7770
PUBLISHER: Marcel Dekker, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:347832
AB We report syntheses of new amide-linked (di-penta)nucleoside analogs of antisense oligonucleotide components. Solution-phase coupling of 3'-(carboxymethyl)-3'-deoxy- and 5'-amino-5'-deoxynucleoside derivs. provides amide dimers. Activated [3'-(carboxymethyl)-3'-deoxy] units with a 5'-azido-5'-deoxy function provide "masked" 5'-amino-5'-deoxy residues for chain extension, and a 5'-O-DMT-protected unit provides the 5'-terminus for attachment to a phosphodiester linkage.
CC 33-9 (Carbohydrates)
IT 100-02-7, reactions 2140-79-6 131132-30-4 133023-98-0
251296-78-3 251296-95-4 251296-99-8 251297-00-4 268748-03-4
268748-04-5 268748-05-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of amide-linked nucleoside analogs of small oligonucleotides)
IT 2140-79-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of amide-linked nucleoside analogs of small oligonucleotides)
RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 21 THERE ARE 21 CAPLUS RECORDS THAT CITE THIS RECORD (21 CITINGS)
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 11 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:655999 HCAPLUS Full-text
DOCUMENT NUMBER: 131:282376
TITLE: Antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages
INVENTOR(S): Ecker, David J.; Cook, Phillip Dan; Monia, Brett P.; Freier, Susan M.; Sanghvi, Yogesh S.
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: U.S., 64 pp., Cont.-in-part of U.S. Ser. No. 317,289.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 326
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

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     WO 9313121            A1    19930708    WO 1992-US11339         19921223 <--
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     EP 1044987            A2    20001018    EP 2000-202252          19921223 <--
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     US 5489677            A     19960206    US 1993-40526           19930331 <--
     WO 9408003            A1    19940414    WO 1993-US9346          19931001 <--
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             BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
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     US 5866698            A     19990202    US 1994-227180          19940413 <--
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     US 5618704            A     19970408    US 1994-300072          19940902 <--
     US 5792844            A     19980811    US 1994-317289          19941003 <--
     US 5808023            A     19980915    US 1994-335046          19941107 <--
     US 5859221            A     19990112    US 1995-468037          19950606 <--
     US 7015315            B1    20060321    US 1995-465866          19950606 <--
     US 5969118            A     19991019    US 1997-794493          19970204 <--
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     AU 713740             B2    19991209
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             KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,
             NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
             UA, UG, US, UZ, VN, YU, ZW
         RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
             FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
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                                               WO 1992-US11339     B1 19921223 <--
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US 1994-317289	A2	19941003 <--
US 1994-335046	A2	19941107 <--
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WO 1992-US4294	B2	19920521 <--
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EP 2000-202252	A3	19921223 <--
JP 1993-511953	A3	19921223 <--
AU 1993-38025	A3	19930225 <--
US 1997-848840	A	19970430 <--
US 1997-948151	A1	19971009 <--
WO 1998-US8800	W	19980430 <--
US 1998-131102	A1	19980807 <--
US 1999-248386	A2	19990212 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Compns. and methods are provided for the modulation of expression of the human ras gene in both the normal and activated forms. Oligonucleotides are provided that have methylene(methylimino) linkages alternating with phosphorothioate or phosphodiester linkages. Further oligonucleotides are provide that have a first region having a methylene(methylimino) linkage alternating with a phosphorothioate or phosphodiester linkage and a second region having phosphorothioate linkages. Such oligonucleotides can be used for diagnostics as well as for research purposes including methods for diagnosis, detection and treatment of conditions arising from the activation of the H-ras gene. Thus, a number of different phosphorothioate-linked antisense oligonucleotides, some containing methylene(methylimino)-linkages, were tested for inhibition of H-ras gene expression as well as tumor cell growth in vivo. These oligonucleotide analogs were directed either to the initiation codon or to mutant codon 12.

IC ICM C07H021-02
ICS C07H021-04; C12Q001-68; A61K048-00

INCL 536023100

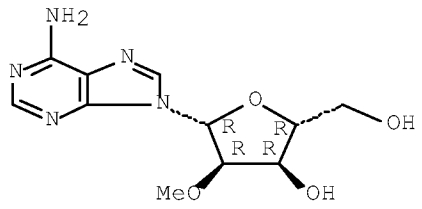
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 1

IT 2140-79-6, 2'-O-Methyladenosine 55486-09-4 110764-72-2
153631-19-7 183737-04-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(antisense inhibition of ras gene with oligonucleotide analogs containing methylene(methylimino) linkages)

IT 2140-79-6, 2'-O-Methyladenosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(antisense inhibition of ras gene with oligonucleotide

analogs containing methylene(methylimino) linkages)
RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

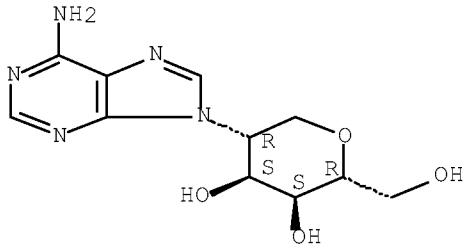
Absolute stereochemistry.



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 362 THERE ARE 362 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 12 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:348789 HCAPLUS Full-text
DOCUMENT NUMBER: 131:45039
TITLE: Synthesis of protected D-altritol nucleosides as building blocks for oligonucleotide synthesis
AUTHOR(S): Allart, Brigitte; Busson, Roger; Rozenski, Jef; Van Aerschot, Arthur; Herdewijn, Piet
CORPORATE SOURCE: Laboratory of Medicinal Chemistry, Rega Institute for Medical Research, Louvain, B-3000, Belg.
SOURCE: Tetrahedron (1999), 55(21), 6527-6546
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB D-Altritol nucleosides with an adenine and uracil base moiety were obtained by nucleophilic opening of the epoxide ring of 1,5:2,3-dianhydro-4,6-O-benzylidene-D-allitol using the sodium salt of the above mentioned bases. The use of a 2-trimethylsilylethyl protecting group for the O6-function of the guanine base offers a useful compromise between stability and acceptable alkylation yields of the N9-position if the guanine base. The cytosine nucleoside was synthesized starting from the uracil congener. The 3'-hydroxyl function was protected with a benzoyl group.
CC 33-9 (Carbohydrates)
IT 168695-97-4P 181961-69-3P 215959-67-4P 227079-04-1P
227079-09-6P 227079-10-9P 227079-14-3P 227079-22-3P 227079-23-4P
227079-25-6P 227079-26-7P 227079-27-8P 227079-28-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of protected D-altritol nucleosides as building blocks for oligonucleotide synthesis)
IT 168695-97-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of protected D-altritol nucleosides as building blocks for oligonucleotide synthesis)
RN 168695-97-4 HCAPLUS
CN D-Altritol, 2-(6-amino-9H-purin-9-yl)-1,5-anhydro-2-deoxy- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 29 THERE ARE 29 CAPLUS RECORDS THAT CITE THIS RECORD (29 CITINGS)
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 13 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1998:728603 HCAPLUS Full-text
DOCUMENT NUMBER: 130:10615
TITLE: Antisense inhibition of human ras genes with chimeric and alternating oligonucleotides
INVENTOR(S): Ecker, David J.; Cook, Philip Dan; Monia, Brett P.; Freier, Susan M.; Sanghvi, Yogesh S.
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 117 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 326
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9849349	A1	19981105	WO 1998-US8800	19980430 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
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AU 9726244	A	19971106	AU 1997-26244	19970624 <--
AU 713740	B2	19991209		
CA 2289454	A1	19981105	CA 1998-2289454	19980430 <--
AU 9875638	A	19981124	AU 1998-75638	19980430 <--
AU 731088	B2	20010322		
EP 981648	A1	20000301	EP 1998-923319	19980430 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
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PRIORITY APPLN. INFO.:

US 1997-848840	A	19970430 <--
US 1991-801168	B1	19911120 <--
US 1991-814961	B2	19911224 <--
US 1992-958134	B2	19921005 <--
WO 1992-US11339	B1	19921223 <--

US 1993-7996	B2	19930121 <--
AU 1993-38025	A3	19930225 <--
US 1993-39979	B1	19930330 <--
US 1993-40526	A2	19930331 <--
US 1993-40903	A3	19930331 <--
US 1993-40933	B1	19930331 <--
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US 1997-948151	A1	19971009 <--
WO 1998-US8800	W	19980430 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Compns. and methods are provided for the modulation of expression of the human H-ras and Ki-ras genes in both the normal and activated forms. Oligonucleotides are provided that have methylene(methylimino) linkages alternating with phosphorothioate or phosphodiester linkages. Further oligonucleotides are provided that have a first region having a methylene(methylimino) linkage alternating with a phosphorothioate or phosphodiester linkage and a second region having phosphorothioate linkages. Such oligonucleotides can be used for diagnostics as well as for research purposes including methods for diagnosis, detection and treatment of conditions arising from the activation of the H-ras gene.

IC ICM C12Q001-68
ICS C12P019-34; C07H019-16; C07H019-167; C07H019-173; C07H019-067; C07H019-06; C07H019-09; C07H021-04; A61K048-00

CC 1-6 (Pharmacology)
Section cross-reference(s): 3, 33

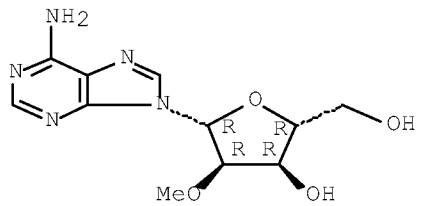
IT 2140-79-6, 2'-O-Methyladenosine 55486-09-4 183737-04-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)

IT 2140-79-6, 2'-O-Methyladenosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(antisense inhibition of human ras genes with chimeric and alternating oligonucleotides)

RN 2140-79-6 HCAPLUS

CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 14 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1998:479638 HCAPLUS Full-text
DOCUMENT NUMBER: 129:91400
ORIGINAL REFERENCE NO.: 129:18739a,18742a
TITLE: Method for polynucleotide amplification using modified oligonucleotide primers having a non-extendable 3'-end
INVENTOR(S): Ullman, Edwin F.; Lishanski, Alla; Kurn, Nurith
PATENT ASSIGNEE(S): Dade Behring Marburg G.m.b.H., Germany
SOURCE: PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9828443	A1	19980702	WO 1997-US23706	19971217 <--
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CA 2246225	A1	19980702	CA 1997-2246225	19971217 <--
EP 904412	A1	19990331	EP 1997-952592	19971217 <--
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US 1996-33137	P	19961220 <--	
WO 1997-US23706	W	19971217 <--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention relates to a method for selectively extending an oligonucleotide primer along a specific target polynucleotide sequence in a mixture of polynucleotides. The method comprises providing the modified oligonucleotide having a 3'-end that is not extendable along any polynucleotide and extending the oligonucleotide primer selectively along the specific target polynucleotide sequence by controlling the degradation of the 3'-end of the modified oligonucleotide. In this way extension along polynucleotides other than the specific target polynucleotide sequence is substantially reduced or avoided. In another aspect the invention is an improvement in a method for amplifying a target polynucleotide sequence. The improvement comprises deriving the oligonucleotide primer from a modified oligonucleotide having a portion that hybridizes to the target polynucleotide sequence except for the 3'-end thereof, which has at least one nucleotide analog that is incapable of hybridizing to a polynucleotide. Thus the use of 3'-etheno-dA-modified oligonucleotides both as inner primers in nested PCR greatly reduced the number of spurious amplification products as determined by gel electrophoresis. Kits for carrying out the above methods are also disclosed.

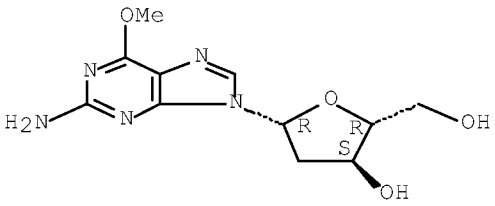
IC ICM C12Q001-68
CC 3-1 (Biochemical Genetics)
IT 964-21-6D, 6-O-Methyl-2'-deoxyguanosine, oligonucleotide 3'-end modified 50591-13-4D, oligonucleotide 3'-end modified 68498-25-9D, Ethenodeoxyadenosine, oligonucleotide 3'-end modified 79393-91-2, 3',5'-Exonuclease
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES

(Uses)
(method for polynucleotide amplification using modified oligonucleotide primers having a non-extendable 3'-end)

IT 964-21-6D, 6-O-Methyl-2'-deoxyguanosine, oligonucleotide 3'-end modified
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method for polynucleotide amplification using modified oligonucleotide primers having a non-extendable 3'-end)

RN 964-21-6 HCAPLUS
CN Guanosine, 2'-deoxy-6-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 15 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1998:227584 HCAPLUS Full-text
DOCUMENT NUMBER: 129:28164
ORIGINAL REFERENCE NO.: 129:6011a,6014a
TITLE: Chemistry of α-amino nitriles. Part 9. Why pentose- and not hexose-nucleic acids? Part 5. Purine-purine pairing in homo-DNA. Guanine, isoguanine, 2,6-diaminopurine, and xanthine
AUTHOR(S): Groebke, Katrin; Hunziker, Juerg; Fraser, William; Peng, Ling; Diederichsen, Ulf; Zimmermann, Kaspar; Holzner, Armin; Leumann, Christian; Eschenmoser, Albert
CORPORATE SOURCE: Laboratorium Organische Chemie, Eidgenoessische Technische Hochschule, Zurich, CH-8092, Switz.
SOURCE: Helvetica Chimica Acta (1998), 81(3), 375-474
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta AG
DOCUMENT TYPE: Journal
LANGUAGE: German

AB The synthesis and pairing properties of homo-DNA oligonucleotides which contain as nucleobases exclusively purines are described, and a survey on purine-purine pairing in homo-DNA is given. In addition, those aspects of the chemical of homo-DNA, which influence the way how some of the structural features of DNA (and RNA) are to be interpreted on a qual. level, are discussed. Purine-purine pairing occurs in the homo-DNA domain in great variety. Most prominent is a novel tridentate Watson-Crick pair between guanine and isoguanine, as well as one between 2,6-diaminopurine and xanthine, both giving rise to very stable duplexes containing the all-purine strands in antiparallel orientation. For the guanine-isoguanine pair, constitutional assignment is based on temperature-dependent UV and CD of guanine- and isoguanine-

containing duplexes in comparison with duplexes known to be paired in the reverse-Hoogsteen mode. The assignment is supported by the characteristic changes observed in pairing behavior when guanine is replaced by 7-carbaguanine. Isoguanine and 2,6-diaminopurine also have the capability of self-pairing in the reverse-Hoogsteen mode, as previously observed for adenine and guanine. In this type of pairing, the purine bases that contain an amino group in the 6-position (adenine, 2,6-diaminopurine, and isoguanine) behave interchangeably. Watson-Crick pairing of isoguanine with guanine demands the former to participate in its 3H-tautomeric form. Whereas (cumulative) purine-purine pairing in DNA seems to occur in triplexes and tetraplexes only, its occurrence in duplexes is a characteristic feature of homo-DNA chemical The occurrence of purine-purine Watson-Crick base pairs is probably a consequence of homo-DNA's quasi-linear ladder structure. In a double helix, the distance between the 2 sugar C-atoms, on which a base pair is anchored, is expected to be constrained by the dimensions of the helix. In a linear duplex, however, there would be no restrictions with regard to base-pair length. Homo-DNA's ladder-like model also allows one to recognize one of the reasons why nucleic-acid duplexes prefer to pair in antiparallel, rather than parallel strand orientation. In homo-DNA duplexes, (averaged) backbone and base pair axes are strongly inclined toward one another. The stronger this inclination, the higher the preference for antiparallel strand orientation is expected to be. Homo-DNA is one of the first artificial oligonucleotide systems to demonstrate in a comprehensive way that informational base pairing involving purines and pyrimidines is not a capability unique to ribofuranosyl systems. Stability and helical shape of pairing complexes are not necessary conditions of one another. It is the potential for extensive conformational cooperativity of the backbone structure with respect to the constitutional demands of base pairing and base stacking that dets. whether or not a given type of base-carrying backbone structure is an informational pairing system.

CC 33-10 (Carbohydrates)
Section cross-reference(s): 6

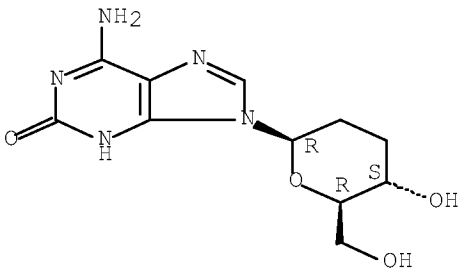
IT 207674-05-3P 207674-09-7P 207674-13-3P 207674-30-4P
207674-31-5P 207674-32-6P 207674-33-7P 207674-34-8P 207674-35-9P
207674-36-0P 207674-37-1P 207674-38-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of purine homo-DNA oligonucleotides)

IT 207674-13-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of purine homo-DNA oligonucleotides)

RN 207674-13-3 HCAPLUS

CN 2H-Purin-2-one, 6-amino-9-(2,3-dideoxy-β-D-erythro-hexopyranosyl)-1,9-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



OS.CITING REF COUNT: 67 THERE ARE 67 CAPLUS RECORDS THAT CITE THIS RECORD (67 CITINGS)

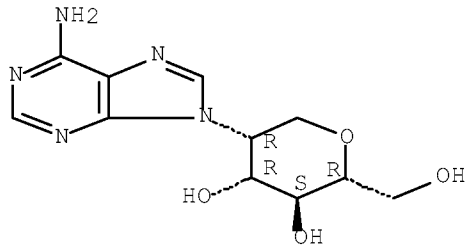
L35 ANSWER 16 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1998:158720 HCAPLUS Full-text
DOCUMENT NUMBER: 128:270804
ORIGINAL REFERENCE NO.: 128:53609a,53612a
TITLE: Oligonucleotides composed of 2'-deoxy-1',5'-anhydro-D-mannitol nucleosides with a purine base moiety
AUTHOR(S): Hossain, Nafizal; Wroblowski, Berthold; Van Aerschot, Arthur; Rozenski, Jef; De Bruyn, Andre; Herdewijn, Piet
CORPORATE SOURCE: Laboratory of Medicinal Chemistry, Rega Institute for Medical Research, K.U. Leuven, Louvain, B-3000, Belg.
SOURCE: Journal of Organic Chemistry (1998), 63(5), 1574-1582
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB 2'-Deoxy-D-mannitol nucleosides with a purine base moiety have been conveniently synthesized starting from 1,5-anhydro-4,6-O-benzylidene-D-glucitol. The 3-OH function of 1,5-anhydro-4,6-O-benzylidene-D-glucitol was selectively protected with tert-butyldimethylsilyl group, and the 2'-OH function was subsequently converted to the corresponding O-triflate derivative for the introduction of the nucleobase moieties. These nucleoside derivs. were transformed to 1,5-anhydro-4-O-(P-(2-cyanoethyl)-P-(N,N-diisopropylamino)phosphinyl)-2- deoxy-6-O-monomethoxytrityl-3-O-(tert-butyldimethylsilyl)-D-mannitol with either a 2-(N6-benzoyladenin-9-yl) or a 2-(N2-isobutyrylguanin-9-yl) substituent as the building blocks for oligonucleotide synthesis. The corresponding fully modified oligonucleotides afford considerably less stable duplexes with RNA as compared to the 3-deoxy hexitol nucleic acid analogs described previously. The reason for the lower stability was investigated using mol. modeling. MD simulations of single strand MNA(GCGTAGCG) and MNA(GCGTAGCG) complexed with RNA(CGCAUCGC) in aqueous solution were performed by use of AMBER 4.1 with the particle mesh Ewald (PME) method for the treatment of long-range electrostatic interactions. Frequent hydrogen bonds between the 3'-hydroxyl and the 6'-O of the phosphate backbone of the following base changed the conformation of the single strand as well as the MNA:RNA complex. The MNA:RNA backbone widens up and shows partial unwinding and disruption of base pair hydrogen bonds consistent with their low hybridization potential.

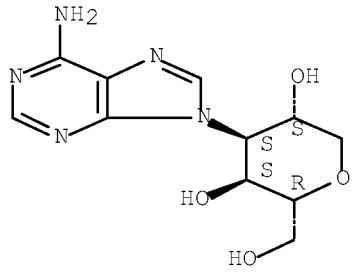
CC 33-9 (Carbohydrates)
IT 168696-01-3P 205382-46-3P 205382-47-4P 205382-55-4P
205382-62-3P 205382-63-4P 205382-64-5P 205382-66-7P
205382-68-9P 205382-70-3P 205382-72-5P 205446-32-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of and mol. modeling of oligonucleotides containing 2'-deoxy-1',5'-anhydro-D-mannitol nucleosides with purine base moiety)
IT 205382-47-4P 205382-62-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of and mol. modeling of oligonucleotides containing 2'-deoxy-1',5'-anhydro-D-mannitol nucleosides with purine base moiety)
RN 205382-47-4 HCAPLUS
CN D-Mannitol, 2-(6-amino-9H-purin-9-yl)-1,5-anhydro-2-deoxy- (CA INDEX NAME)

Absolute stereochemistry.



RN 205382-62-3 HCAPLUS
CN D-Altritol, 3-(6-amino-9H-purin-9-yl)-1,5-anhydro-3-deoxy- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 19 THERE ARE 19 CAPLUS RECORDS THAT CITE THIS RECORD (19 CITINGS)
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 17 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1998:42509 HCAPLUS Full-text
DOCUMENT NUMBER: 128:111547
ORIGINAL REFERENCE NO.: 128:21785a,21788a
TITLE: Hybridization using probes that produce stable hybrids with stability substantially independent of base compositions
INVENTOR(S): Nguyen, Thuong; Asseline, Ulysse; Nguyen, H. K.; Durand, Maurice; Maurizot, Jean-claude; Dupret, Daniel; Bonfils, Edwige
PATENT ASSIGNEE(S): Appligene-Oncor S.A., Fr.; Nguyen, Thuong; Asseline, Ulysse; Nguyen, H. K.; Durand, Maurice; Maurizot, Jean-Claude; Dupret, Daniel; Bonfils, Edwige
SOURCE: PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9749833	A1	19971231	WO 1997-FR1131	19970625 <--

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         W:  CA, JP, US
         RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
     FR 2750435           A1    19980102    FR 1996-8027           19960627 <--
     FR 2750435           B1    19980828
     CA 2258936           A1    19971231    CA 1997-2258936        19970625 <--
     EP 954610            A1    19991110    EP 1997-930584         19970625 <--
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
     JP 2000512843        T     20001003    JP 1998-502451         19970625 <--
     US 6864049           B1    20050308    US 1999-214403         19990720 <--
PRIORITY APPLN. INFO.:                      FR 1996-8027        A  19960627 <--
                                            WO 1997-FR1131      W  19970625 <--
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S):         MARPAT 128:111547
AB    Hybridization methods for producing a hybridization complex with its stability
      substantially independent of the base composition of two hybridized nucleic acid
      mols. are described.  The method is particularly intended for use in the sequencing
      of DNA by hybridization against large arrays of immobilized oligonucleotides.  One
      of the methods of bringing about this stability is to use base analogs that do not
      adversely affect hybrid stability in the probe or the target sequence.  The
      synthesis of a number of alkyl substituted base analogs and their incorporation into
      oligonucleotides using standard phosphoramidite chemical is described. Hybridization
      properties of these probes are also described.
IC    ICM  C12Q001-68
      ICS  C07H021-00
CC    3-1 (Biochemical Genetics)
IT    50-92-0P   147-94-4P, Cytosine arabinoside   4546-70-7P, Adenosine,
      2-amino-2'-deoxy-   13389-03-2P   19916-77-9P, Guanosine,
      2'-deoxy-N-methyl-   22882-02-6P, Cytidine, 2'-deoxy-N-methyl-
      61135-33-9P, Uridine, 2'-deoxy-5-ethynyl-   70465-61-1P, Cytidine,
      2'-deoxy-N-ethyl-   86392-75-8P, 7-Deaza-2'-deoxyguanosine   101803-03-6P,
      Guanosine, 2'-deoxy-N-ethyl-   124469-81-4P   137422-58-3P, Uridine,
      2'-deoxy-5-(2-propynyl)-   180867-67-8P, Guanosine, 2'-deoxy-N-propyl-
      199533-76-1P, Cytidine, 2'-deoxy-N-propyl-   199533-77-2P, Cytidine,
      2'-deoxy-N-2-propenyl-   199533-78-3P, Cytidine, 2'-deoxy-N-2-propynyl-
      201528-73-6P   201528-74-7P   201528-75-8P   201528-76-9P
      RL: ARU (Analytical role, unclassified); PRP (Properties); SPN (Synthetic
      preparation); ANST (Analytical study); PREP (Preparation)
         (oligonucleotides containing; hybridization using probes that
         produce stable hybrids with stability substantially independent of base
         compns.)
IT    19916-77-9P, Guanosine, 2'-deoxy-N-methyl-
      RL: ARU (Analytical role, unclassified); PRP (Properties); SPN (Synthetic
      preparation); ANST (Analytical study); PREP (Preparation)
         (oligonucleotides containing; hybridization using probes that
         produce stable hybrids with stability substantially independent of base
         compns.)
RN    19916-77-9  HCAPLUS
CN    Guanosine, 2'-deoxy-N-methyl- (8CI, 9CI)  (CA INDEX NAME)

Absolute stereochemistry.
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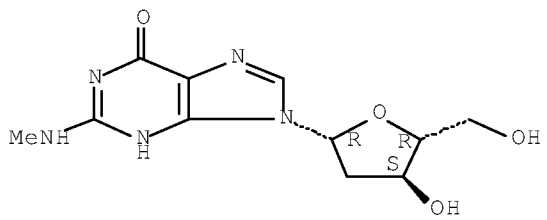
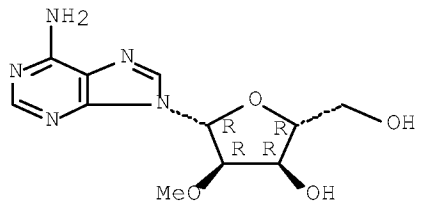


REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 18 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1997:758235 HCAPLUS Full-text
DOCUMENT NUMBER: 128:34962
ORIGINAL REFERENCE NO.: 128:6901a,6904a
TITLE: An efficient multigram synthesis of monomers for the preparation of novel oligonucleotides containing isosteric non-phosphorous backbones
AUTHOR(S): Dimock, Stuart; Bhat, Balkrishen; Peoc'h, Didier; Sanghvi, Yogesh S.; Swayze, Eric E.
CORPORATE SOURCE: Isis Pharmaceuticals, Carlsbad, CA, 92008, USA
SOURCE: Nucleosides & Nucleotides (1997), 16(7-9), 1629-1632
CODEN: NUNUD5; ISSN: 0732-8311
PUBLISHER: Marcel Dekker, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The facile preparation of two novel classes of nucleoside analogs for the inclusion as dimeric non-phosphorous containing subunits in chimeric backbones has been accomplished. The concise preparation of 3'-formylnucleosides and 5'-O-(N-methylhydroxylamino)nucleosides is reported.
CC 33-9 (Carbohydrates)
IT 2140-79-6 55486-09-4 63264-29-9 85079-00-1 183737-04-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(multigram synthesis of monomers for the preparation of novel oligonucleotides containing isosteric non-phosphorous backbones)
IT 2140-79-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(multigram synthesis of monomers for the preparation of novel oligonucleotides containing isosteric non-phosphorous backbones)
RN 2140-79-6 HCAPLUS
CN Adenosine, 2'-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 19 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1997:461320 HCAPLUS Full-text
DOCUMENT NUMBER: 127:205806
ORIGINAL REFERENCE NO.: 127:40015a,40018a

TITLE: Studies on the base-pairing properties of N7-(2-deoxy-β-D-erythro-pentofuranosyl)guanine (N7Gd)
AUTHOR(S): Seela, Frank; Leonard, Peter
CORPORATE SOURCE: Institut Chemie, Universitat Osnabruck, Osnabrueck, D-49069, Germany
SOURCE: Helvetica Chimica Acta (1997), 80(4), 1301-1318
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The base-pairing properties of N7-(2-deoxy-β-D-erythro- pentofuranosyl)guanine (N7Gd; I) are investigated. Nucleoside I was obtained by nucleobase-anion glycosylation. The glycosylation reaction of various 6-alkoxy-purin-2-amines with 2-deoxy-3,5-di-O-(4-toluoyl)-α-D-erythro-pentofuranosyl chloride was studied. The N9/N7-glycosylation ratio was 1:1 when 6-isopropoxypurin-2-amine was used, whereas 6-(2-methoxyethoxy)purin-2-amine gave mainly the N9-nucleoside (2:1). Oligonucleotides containing I were prepared by solid-phase synthesis and hybridized with complementary strands having the 4 conventional nucleosides located opposite to N7Gd. According to Tm values and enthalpy data of duplex formation, a base pair between N7Gd and dG is suggested. From the possible N7Gd.dG base pair motives, Hoogsteen pairing can be excluded as 7-deaza-2'-deoxyguanosine forms the same stable base pair with N7Gd as dG.

CC 33-9 (Carbohydrates)

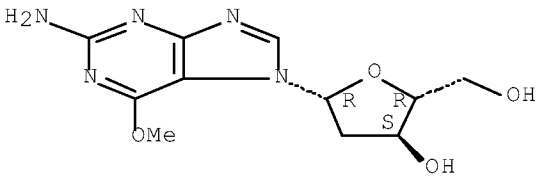
IT 71-41-0, 1-Pentanol, reactions 75-84-3 78-83-1, Isobutanol, reactions 6331-91-5, 2-Amino-6-propoxypurine 10310-21-1, 6-Chloropurin-2-amine 51866-19-4, 2-Amino-6-ethoxypurine 55146-05-9 76412-62-9, 2-Amino-6-butoxypurine 89992-70-1 105797-60-2 177162-18-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of (deoxypentofuranosyl)guanine-(N7Gd)-containing oligonucleotides and effect on thermal stability of base pairs)

IT 177162-18-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of (deoxypentofuranosyl)guanine-(N7Gd)-containing oligonucleotides and effect on thermal stability of base pairs)

RN 177162-18-4 HCAPLUS

CN 7H-Purin-2-amine, 7-(2-deoxy-β-D-erythro-pentofuranosyl)-6-methoxy- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L35 ANSWER 20 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1997:453550 HCAPLUS Full-text
DOCUMENT NUMBER: 127:162065
ORIGINAL REFERENCE NO.: 127:31427a,31430a
TITLE: Improved synthesis of anhydrohexitol building blocks

for oligonucleotide synthesis

AUTHOR(S): De Bouvere, Bart; Kerremans, Luc; Rozenski, Jef; Janssen, Gerard; Van Aerschot, Arthur; Claes, Paul; Busson, Roger; Herdewijn, Piet

CORPORATE SOURCE: Rega Institute, K. Universitat Leuven, Louvain, B-3000, Belg.

SOURCE: Liebigs Annalen/Recueil (1997), (7), 1453-1461
CODEN: LIARFV

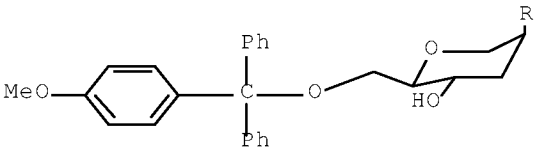
PUBLISHER: Wiley-VCH

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 127:162065

GI



I

AB The syntheses of the 4 protected building blocks I (R = N2-isobutyrylguanin-9-yl, N6-benzoyladenin-9-yl, N4-benzoylcytosin-1-yl, thymin-1-yl) used for the preparation of hexitol nucleic acids were optimized. The nucleoside analogs with a purine base moiety are best prepared by nucleophilic substitution, whereas the pyrimidine nucleosides can best be obtained using Mitsunobu-type conditions.

CC 33-9 (Carbohydrates)

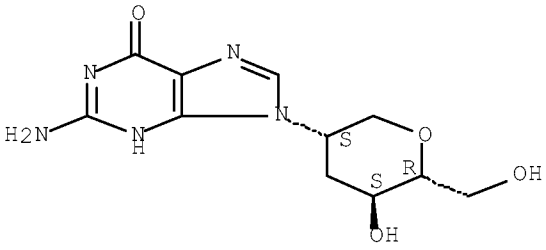
IT 149312-02-7P 149312-05-0P 149312-06-1P 149312-07-2P
149312-09-4P 149312-12-9P 149312-13-0P 149312-14-1P 149312-18-5P
156126-48-6P 175471-36-0P 176786-71-3P 176786-72-4P 193559-16-9P
193559-17-0P 193559-18-1P, preparation 193559-20-5P 193559-25-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of anhydrohexitol nucleosides as oligonucleotide precursors)

IT 149312-06-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of anhydrohexitol nucleosides as oligonucleotide precursors)

RN 149312-06-1 HCAPLUS

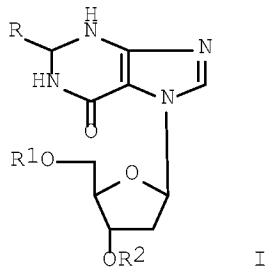
CN D-arabino-Hexitol, 2-(2-amino-1,6-dihydro-6-oxo-9H-purin-9-yl)-1,5-anhydro-2,3-dideoxy- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



OS.CITING REF COUNT: 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)

L35 ANSWER 21 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1996:206593 HCAPLUS Full-text
DOCUMENT NUMBER: 125:11328
ORIGINAL REFERENCE NO.: 125:2485a,2488a
TITLE: N7-DNA: synthesis and base pairing of oligonucleotides containing N7-(2-deoxy-β-D-erythro-pentofuranosyl)guanine (N7Gd)
AUTHOR(S): Seela, Frank; Leonard, Peter
CORPORATE SOURCE: Inst. Chemie, Univ. Osnabrueck, Osnabrueck, D-49069, Germany
SOURCE: Helvetica Chimica Acta (1996), 79(2), 477-87
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB The synthesis of oligonucleotides containing I (R = NH2, R1 = R2 = H) is described. The latter was prepared by nucleobase-anion glycosylation of 2-amino-6-methoxypurine with 2-deoxy-3,5-di-O-(4-toluoyl)-α-D- erythro-pentofuranosyl chloride followed by detoluoylation and displacement of the MeO group. Upon base protection with the Me2NHC:-residue the 4,4-dimethoxytrityl group was introduced at OH-C(5'). The phosphonate I [R = N:CNHMe2, R1 = CPh(4-C6H4OMe)2, R2 = PHO2-NHEt3+] and the phosphoramidite I [R = N:CNHMe2, R1 = CPh(4-C6H4OMe)2, R2 = PN(CHMe2)2O(CH2)2CN] were prepared and used in solid-phase oligonucleotide synthesis. The self-complementary dodecamer d(N7G-C)6 shows sigmoidal melting. The Tm of the duplex is 40°. This demonstrates that guanine residues linked via N(7) of purine to the phosphodiester backbone are able to undergo base pairing with cytosine.

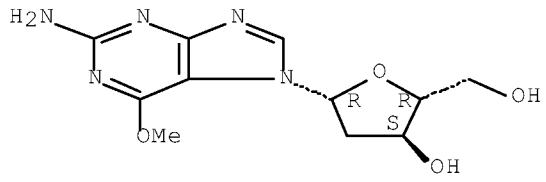
CC 33-9 (Carbohydrates)

IT 159791-63-6P 177162-14-0P 177162-16-2P 177162-17-3P
177162-18-4P 177162-19-5P 177162-20-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and base pairing of oligonucleotides containing (deoxypentofuranosyl)guanine)

IT 964-21-6P 177162-15-1P 177162-21-9P 177257-50-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and base pairing of oligonucleotides containing (deoxypentofuranosyl)guanine)

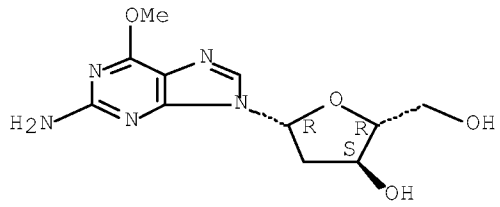
IT 177162-18-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and base pairing of oligonucleotides containing (deoxypentofuranosyl)guanine)
RN 177162-18-4 HCAPLUS
CN 7H-Purin-2-amine, 7-(2-deoxy-β-D-erythro-pentofuranosyl)-6-methoxy- (CA INDEX NAME)

Absolute stereochemistry.



IT 964-21-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and base pairing of oligonucleotides containing (deoxypentofuranosyl)guanine)
RN 964-21-6 HCAPLUS
CN Guanosine, 2'-deoxy-6-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)

L35 ANSWER 22 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1996:164731 HCAPLUS Full-text
DOCUMENT NUMBER: 124:253616
ORIGINAL REFERENCE NO.: 124:46817a,46820a
TITLE: Synthesis and characterization of 8-methoxy-2'-deoxyadenosine-containing oligonucleotides to probe the syn glycosidic conformation of 2'-deoxyadenosine within DNA
AUTHOR(S): Eason, Robert G.; Burkhardt, Dawn M.; Phillips, Shirley J.; Smith, David P.; David, Shelia S.
CORPORATE SOURCE: Dep. Chemistry, Univ. California, Santa Cruz, CA, 95064, USA
SOURCE: Nucleic Acids Research (1996), 24(5), 890-7
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The synthesis of 8-methoxy-2'-deoxyadenosine (moA) protected at N6 as an N,N-dimethylformamide derivative and incorporation of the modified nucleoside into oligodeoxynucleotides via the phosphoramidite method are described. UV thermal denaturation studies were conducted on duplexes containing moA:G, moA:C and moA:T base pairs to determine the thermodn. stability of duplexes containing moA relative to their adenosine (A)-containing counterparts. In the case of moA:G base pairs the effect of moA substitution is sequence dependent. In A:G mismatch-containing sequences, which have been shown by structural characterization to have a syn conformational preference at the glycosidic bond of A, moA substitution results in stabilization of the duplexes. In contrast, in sequences where the A in the A:G mismatch has been shown to prefer the anti conformation moA substitution is destabilizing to the duplexes. Thus moA may be a useful probe for investigating the conformational preferences of the N-glycosidic bond of adenosine within DNA. In addition, moA nucleoside is more resistant to acid-catalyzed depurination than previously described 8-bromo-2'-deoxyadenosine, allowing for facile incorporation into oligonucleotides via automated solid phase DNA synthesis.

CC 6-2 (General Biochemistry)
Section cross-reference(s): 3, 33

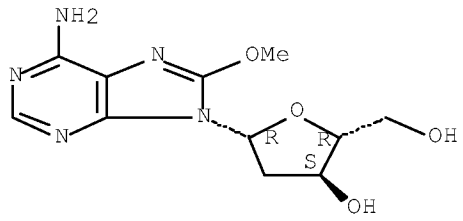
IT 17318-17-1P, 8-Methoxydeoxyadenosine
RL: BUU (Biological use, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(synthesis and characterization of 8-methoxy-2'-deoxyadenosine-containing oligonucleotides to probe syn glycosidic conformation of 2'-deoxyadenosine within DNA)

IT 17318-17-1P, 8-Methoxydeoxyadenosine
RL: BUU (Biological use, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(synthesis and characterization of 8-methoxy-2'-deoxyadenosine-containing oligonucleotides to probe syn glycosidic conformation of 2'-deoxyadenosine within DNA)

RN 17318-17-1 HCAPLUS

CN Adenosine, 2'-deoxy-8-methoxy- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)

L35 ANSWER 23 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1995:520654 HCAPLUS Full-text

DOCUMENT NUMBER: 123:163473

ORIGINAL REFERENCE NO.: 123:28983a,28986a

TITLE: Sequence Composition Effects on the Energetics of Triple Helix Formation by Oligonucleotides Containing a Designed Mimic of Protonated Cytosine

AUTHOR(S): Priestley, E. Scott; Dervan, Peter B.

CORPORATE SOURCE: Arnold and Mabel Beckman Laboratories of Chemical Synthesis, California Institute of Technology, Pasadena, CA, 91125, USA
SOURCE: Journal of the American Chemical Society (1995), 117(17), 4761-5
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A non-natural nucleoside, 1-(2-deoxy-β-D-ribofuranosyl)-3-methyl-5- amino-1H-pyrazolo[4,3-d]pyrimidin-7-one (P), mimics protonated cytosine and specifically binds GC base pairs within a pyrimidine·purine·pyrimidine triple helix. Quant. footprint titration expts. at neutral pH (22 °C, 100 mM NaCl, 10 mM bis-tris, 250 μM spermine) now reveal dramatic sequence composition effects on the energetics of triple helix formation by oligonucleotides containing P or 5-methylcytosine (mC). Purine tracts of sequence composition 5'-d(AAAAAGAGAGAGAGA)-3' are bound by oligonucleotide 5'-d(TTTTTmCTmCTmCTmCTmCT)-3' 4 orders of magnitude more strongly than by 5'-d(TTTTTPTPTPTPTPT)-3' (KT ≈ 3 + 109 M-1 and KT = 1 + 105 M-1, resp.). Conversely, purine tracts of sequence composition 5'-d(AAAAGAAAAGGGGGGA)-3' are bound by oligonucleotide 5'-d(TTTTmCTTTTmCmCmCmCmCT)-3' 5 orders of magnitude less strongly than by 5'-d(TTTTmCTTTTPPPPPPT)-3' (KT < 5 + 104 M-1 and KT ≈ 4 + 109 M-1, resp.). The complementary nature of P and mC expands the repertoire of G-rich sequences which may be targeted by triple helix formation.

CC 6-2 (General Biochemistry)

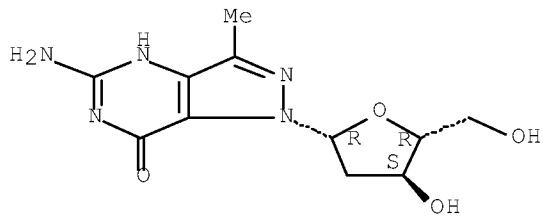
IT 138898-78-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(sequence composition effect on energetics of triple helix formation by oligonucleotides containing protonated cytosine mimic as)

IT 138898-78-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(sequence composition effect on energetics of triple helix formation by oligonucleotides containing protonated cytosine mimic as)

RN 138898-78-9 HCAPLUS

CN 7H-Pyrazolo[4,3-d]pyrimidin-7-one, 5-amino-1-(2-deoxy-β-D-erythro-pentofuranosyl)-1,4-dihydro-3-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)

L35 ANSWER 24 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1994:124262 HCAPLUS Full-text
DOCUMENT NUMBER: 120:124262
ORIGINAL REFERENCE NO.: 120:21681a,21684a
TITLE: Hybridization specificity, enzymic activity and biological (Ha-ras) activity of oligonucleotides

containing 2,4-dideoxy-β-D-erythro-hexopyranosyl nucleosides

AUTHOR(S): Augustyns, K.; Godard, G.; Hendrix, C.; Van Aerschot, A.; Rozenski, J.; Saison-Behmoaras, T.; Herdewijn, P.

CORPORATE SOURCE: Rega Inst. Med. Res., Kathol. Univ. Leuven, Louvain, F-75231, Belg.

SOURCE: Nucleic Acids Research (1993), 21(20), 4670-6
CODEN: NARHAD; ISSN: 0305-1048

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Antisense oligonucleotides with a 2,4-dideoxyhexopyranosyl nucleotide incorporated at the 3'-end and at a mutation site of the Ha-ras oncogene mRNA were synthesized. Melting temperature studies revealed that an A*-G mismatch is more stable than an A*-T mismatch with these hexopyranosyl nucleotides incorporated at the mutation site. The oligonucleotides are stable against enzymic degradation RNase H mediated cleavage studies revealed selective cleavage of mutated Ha-ras mRNA. The oligonucleotide containing two pyranose nucleosides at the penultimate position activates RNase H more strongly than natural oligonucleotides. No correlation, however, was found between DNA-DNA or RNA-DNA melting temps. and RNAse H mediated cleavage capacity. Although the A*-G mismatch gives more stable hybridization than the A*-T base pairing, only the oligonucleotides containing an A*-T base pair are recognized by RNase H. This modification is situated 3 base pairs upstream to the cleavage site. Finally, the double pyranose modified oligonucleotide was able to reduce the growth of T24 cells (bladder carcinoma) while the unmodified antisense oligonucleotide was not.

CC 1-6 (Pharmacology)

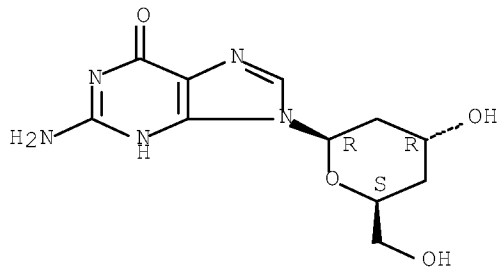
IT 144564-44-3 144564-45-4 144564-46-5 149067-61-8
149067-62-9 149067-63-0 152335-60-9 152335-61-0
152335-62-1 152335-63-2 152335-64-3 152335-65-4 152335-66-5
152335-67-6 152335-68-7
RL: BIOL (Biological study)
(in prepare of dideoxyerythrohexopyranosyl-containing antisense oligonucleotides)

IT 149067-62-9
RL: BIOL (Biological study)
(in prepare of dideoxyerythrohexopyranosyl-containing antisense oligonucleotides)

RN 149067-62-9 HCAPLUS

CN 6H-Purin-6-one, 2-amino-9-(2,4-dideoxy-β-D-erythro-hexopyranosyl)-1,9-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)

L35 ANSWER 25 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1993:403494 HCAPLUS Full-text
DOCUMENT NUMBER: 119:3494
ORIGINAL REFERENCE NO.: 119:726h,727a
TITLE: Inhibition of transcription by formation of triple helices
INVENTOR(S): Toole, John J.
PATENT ASSIGNEE(S): Gilead Sciences, Inc., USA
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

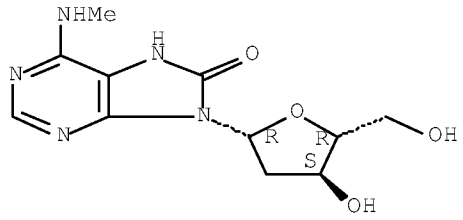
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9210590	A1	19920625	WO 1991-US9321	19911210 <--
W: AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, SD, SE, SU				
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, MC, ML, MR, NL, SE, SN, TD, TG				
AU 9191465	A	19920708	AU 1991-91465	19911210 <--

PRIORITY APPLN. INFO.: US 1990-625680 A 19901210 <--
WO 1991-US9321 A 19911210 <--

AB A method for inhibiting transcription by binding the transcribed regions with oligonucleotides to form a triple helix is described. Triple helices can be formed by Hoogsteen base-pairing in the transcribed regions of the gene using an oligomer of 10-25 bases that contains CT (cytosine-thymine) or GT (guanine-thymine) motifs, and oligomers with inverted repeats. The oligonucleotides may also have terminal reactive groups or groups that will bind to the major groove of the DNA. Binding activity of the oligomers is aided by the incorporation of a base analog e.g. alkylating base analog, acridinyl nucleotide, aziridinylcytosine, anthraquinone derivative, N6-Me-8-OH-2'-deoxyadenosine, or 5-methylcytosine. Derivatization of analogs, preparation of the oligomers with conventional solid phase synthesis, and their effects on transcription are also demonstrated.

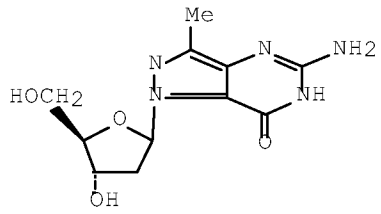
IC ICM C12Q001-68
ICS C12P021-00; C12N015-00
CC 6-2 (General Biochemistry)
IT 136205-37-3P 143740-72-1P 143740-73-2P 144049-45-6P
144049-46-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions of, in preparation of triple helix-forming oligonucleotide)
IT 143740-73-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions of, in preparation of triple helix-forming oligonucleotide)
RN 143740-73-2 HCAPLUS
CN Adenosine, 2'-deoxy-7,8-dihydro-N-methyl-8-oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

L35 ANSWER 26 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1992:427010 HCAPLUS Full-text
DOCUMENT NUMBER: 117:27010
ORIGINAL REFERENCE NO.: 117:4907a,4910a
TITLE: Design of a nonnatural deoxyribonucleoside for recognition of GC base pairs by oligonucleotide-directed triple helix formation
AUTHOR(S): Koh, Jong Sung; Dervan, Peter B.
CORPORATE SOURCE: Arnold and Mabel Beckman Lab. Chem. Synth., California Inst. Technol., Pasadena, CA, 91125, USA
SOURCE: Journal of the American Chemical Society (1992), 114(4), 1470-8
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



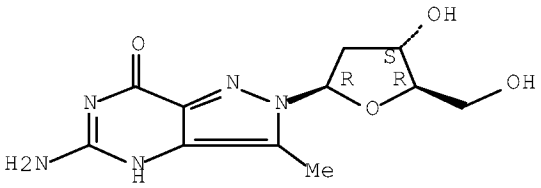
I

AB Deoxyribonucleoside I, was designed such that 2 specific hydrogen bonds would form with guanine (G) of a Watson-Crick guanine-cytosine (GC) base pair in the major groove of double-helical DNA. One edge of I heterocycle mimics N3-protonated cytosine, which would circumvent the pH dependence observed for the formation of triple helices containing C + GC base triplets. I was synthesized in 5 steps and incorporated by automated methods in pyrimidine oligodeoxyribonucleotides. From affinity cleaving analyses, the stabilities of base triplets decrease in the order P1.GC » P1.CG » P1.AT .apprx. P1.TA (pH 7.4, 35 °C). I binds GC base pairs within a pyrimidine triple-helix motif as selectively and strongly as C but over an extended pH range. Oligodeoxyribonucleotides containing I residues were shown to bind within plasmid DNA a single 15 base pair site containing 5 GC base pairs at pH 7.8 and a single 16 base pair site containing 6 contiguous GC base pairs at pH 7.4.

CC 33-9 (Carbohydrates)
IT 138836-88-1P 138898-78-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as monomer for oligonucleotide base pairing)

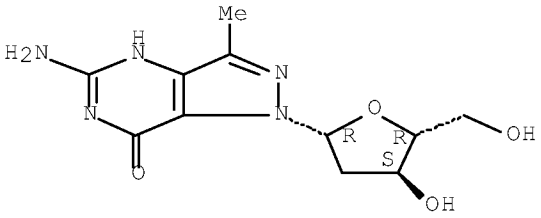
IT 138836-88-1P 138898-78-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as monomer for oligonucleotide base pairing)
RN 138836-88-1 HCAPLUS
CN 7H-Pyrazolo[4,3-d]pyrimidin-7-one,
5-amino-2-(2-deoxy-β-D-erythro-pentofuranosyl)-2,4-dihydro-3-methyl-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 138898-78-9 HCAPLUS
CN 7H-Pyrazolo[4,3-d]pyrimidin-7-one,
5-amino-1-(2-deoxy-β-D-erythro-pentofuranosyl)-1,4-dihydro-3-methyl-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 58 THERE ARE 58 CAPLUS RECORDS THAT CITE THIS RECORD (59 CITINGS)

L35 ANSWER 27 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1991:656517 HCAPLUS Full-text
DOCUMENT NUMBER: 115:256517
ORIGINAL REFERENCE NO.: 115:43641a,43644a
TITLE: 8-Methyladenosine-substituted analogs of 2-5A: synthesis and their biological activities
AUTHOR(S): Kitade, Yukio; Nakata, Yoshitaka; Hirota, Kosaku; Maki, Yoshfumi; Pabuccuoglu, Aysun; Torrence, Paul F.
CORPORATE SOURCE: Lab. Med. Chem., Gifu Pharm. Univ., Gifu, 502, Japan
SOURCE: Nucleic Acids Research (1991), 19(15), 4103-8
CODEN: NARHAD; ISSN: 0305-1048
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 8-Methyladenosine-substituted analogs of 2-5A, p5'A2'p5'A2'p5'(me8A), p5'A2'p5'(me8A)2'p5'(me8A), p5'(me8A)2'p5'(me8A)2'p5'(me8A), and p5'(me8A)2'p5'A2'p5'A, were prepared via a modification of a Pb ion-catalyzed ligation reaction. These 2-5A monophosphates were converted into the corresponding

5'-triphosphates. Substitution of an 8-methyladenosine residue at the third position (2'-terminus) of the oligonucleotides increased the stability to snake venom phosphodiesterase digestion. Both binding and activation of mouse liver 2-5A dependent RNase by the various 8-methyladenosine-substituted 2-5A analogs were examined Among the 8-methyladenosine-substituted trimer analogs, the analogs with 8-methyladenosine residing in the 2'-terminal position showed the strongest binding affinity and were several times more effective than 2-5A itself as an inhibitor of translation.

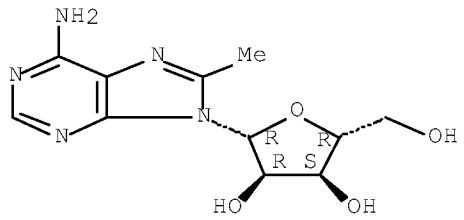
CC 33-9 (Carbohydrates)
Section cross-reference(s): 7

IT 56973-12-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, in synthesis of oligonucleotides)

IT 56973-12-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, in synthesis of oligonucleotides)

RN 56973-12-7 HCAPLUS
CN Adenosine, 8-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 23 THERE ARE 23 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)

L35 ANSWER 28 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1989:130229 HCAPLUS Full-text
DOCUMENT NUMBER: 110:130229
ORIGINAL REFERENCE NO.: 110:21387a,21390a
TITLE: Formation of O6-methyldeoxyguanosine at specific sites in a synthetic oligonucleotide designed to resemble a known mutagenic hotspot
AUTHOR(S): Richardson, Frank C.; Boucheron, Joyce A.; Skopek, Thomas R.; Swenberg, James A.
CORPORATE SOURCE: Dep. Biochem. Toxicol., Chem. Ind. Inst. Toxicol., Research Triangle Park, NC, 27709, USA
SOURCE: Journal of Biological Chemistry (1989), 264(2), 838-41
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Four synthetic oligodeoxyribonucleotides of the sequence 5'-CCG1TG2G3G4ATATGGGCTG-3' were constructed with a 1',2'-[3H]deoxyguanosine located at one of the four sites indicated (1, 2, 3, or 4). This sequence was derived from a region of the Escherichia coli xanthine-guanine phosphoribosyltransferase gene where position 4 is a site frequently mutated by N-methyl-N'-nitrosourea as compared to sites 1-3. These four oligomers were alkylated in both single- and double-stranded form with N-methyl-N'-nitrosourea, and the relative amount of O6-methyldeoxyguanosine (O6-MedGuo) formed at each position was quantitated. Up to a 5-6-fold greater formation of O6-MedGuo was observed at positions 3 and 4 as compared to positions 1 and 2.

This uneven distribution was only observed in oligomers in the double-stranded form, suggesting that secondary structure was an important determinant in generating the uneven distribution of O6-MedGuo. Comparisons between the extent of O6-MedGuo formation and mutation frequency at the four positions suggest that a difference in the formation of promutagenic adducts at specific sites is just one of the factors involved in the generation of mutagenic hot-spots. The novel method developed was applied to the study of formation of O6-MedGuo at specific sites; however, it should be suitable for studying the formation and repair of DNA adducts generated by a variety of chems. in a wide variety of DNA sequences.

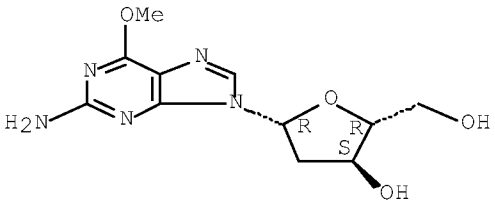
CC 4-6 (Toxicology)
Section cross-reference(s): 26

IT 578-76-7, N7-Methylguanine 964-21-6, O6-Methyldeoxyguanosine
20535-83-5, O6-Methylguanine
RL: FORM (Formation, nonpreparative)
(formation of, in oligonucleotide after methylnitrosourea methylation)

IT 964-21-6, O6-Methyldeoxyguanosine
RL: FORM (Formation, nonpreparative)
(formation of, in oligonucleotide after methylnitrosourea methylation)

RN 964-21-6 HCAPLUS
CN Guanosine, 2'-deoxy-6-O-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

L35 ANSWER 29 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1987:150459 HCAPLUS Full-text
DOCUMENT NUMBER: 106:150459
ORIGINAL REFERENCE NO.: 106:24417a,24420a
TITLE: Inhibition of methylation at two internal N6-methyladenosine sites caused by GAC to GAU mutations
AUTHOR(S): Kane, Susan E.; Beemon, Karen
CORPORATE SOURCE: Dep. Biol., Johns Hopkins Univ., Baltimore, MD, 21218, USA
SOURCE: Journal of Biological Chemistry (1987), 262(7), 3422-7
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Previously, N6-methyladenosine (m6A) [1867-73-8] sites within the genomic RNA of Rous sarcoma virus (RSV) were mapped. The results of that study and of expts. using inhibitors of methylation suggest that m6A might be involved in mRNA processing events. An approach is described for directly analyzing the function of m6A in RNA and for studying the sequence specificity of the m6A methylase [9076-81-7]. Two sites of methylation in RSV (nucleotides 7414 and 7424) were altered by

oligonucleotide-directed mutagenesis. The highly conserved GAC consensus sequence at those sites was changed to GAU. The new sequences were no longer methylated in the RSV genomic RNA; the GAC sequence was required for efficient base modification at those 2 adenosines. The altered m6A pattern did not affect viral RNA processing or the viral life cycle within infected cells.

CC 3-2 (Biochemical Genetics)

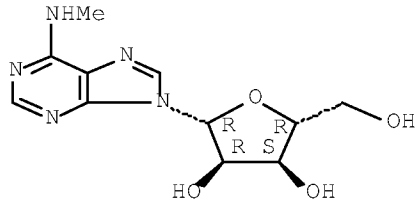
IT 1867-73-8, N6-Methyladenosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(methylation of, in Rous sarcoma virus RNA, oligonucleotide -directed mutations for inhibition of)

IT 1867-73-8, N6-Methyladenosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(methylation of, in Rous sarcoma virus RNA, oligonucleotide -directed mutations for inhibition of)

RN 1867-73-8 HCAPLUS

CN Adenosine, N-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L35 ANSWER 30 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1983:288 HCAPLUS Full-text

DOCUMENT NUMBER: 98:288

ORIGINAL REFERENCE NO.: 98:59a,62a

TITLE: Extracellular action of adenosine and the antagonism by aminophylline on the atrioventricular conduction of isolated perfused guinea pig and rat hearts

AUTHOR(S): Belardinelli, Luiz; Fenton, Richard A.; West, Alexander; Linden, Joel; Althaus, John S.; Berne, Robert M.

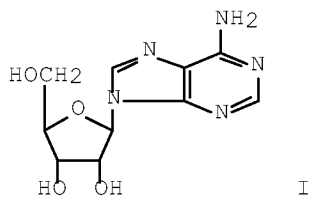
CORPORATE SOURCE: Sch. Med., Univ. Virginia, Charlottesville, VA, USA

SOURCE: Circulation Research (1982), 51(5), 569-79
CODEN: CIRUAL; ISSN: 0009-7330

DOCUMENT TYPE: Journal

LANGUAGE: English

GI

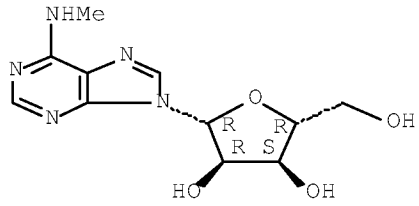


I

AB In isolated perfused guinea pig and rat hearts the nucleoside transport inhibitors dipyridamole [58-32-2], nitrobenzylthioinosine [83689-41-2], and diazepam [439-14-5] caused a concentration-dependent decrease in the uptake of 14C-labeled adenosine (I) [58-61-7]. Nitrobenzylthioinosine was the most and diazepam the least effective in blocking adenosine uptake. Dipyridamole (5 + 10-6M) inhibited uptake by 97% and increased adenosine levels in the perfusate. These effects were strongly correlated with a potentiation of adenosine-induced atrial-His prolongation. The oligonucleotide adenyl-(3'-5')9-adenosine [52206-42-5], an agent restricted to the extracellular space as a result of its large mol. size, was 1.8 times more potent per mol than free adenosine. 2'-deoxyadenosine [958-09-8] And N6-methyladenosine [1867-73-8] had no effect and an effect similar to that of free adenosine, resp., on the atrial-His interval. aminophylline [317-34-0] (1 + 10-5-3 + 10-5M) in the presence or absence of propranolol antagonized in a concentration-dependent and competitive manner the prolongation of the atrial-His interval and atrioventricular block caused by adenosine. In concns. up to 10-4M, aminophylline did not cause any accumulation of myocardial cyclic AMP [60-92-4] nor did it increase the release of norepinephrine. Thus, the effect of adenosine on atrioventricular conduction results from binding to an extracellular receptor that resembles the R site described for other actions of adenosine in different tissues, and the reversal of adenosine-induced increases in atrioventricular conduction delay by aminophylline is not due to phosphodiesterase inhibition and/or release of norepinephrine from nerve terminals.
CC 1-8 (Pharmacology)
Section cross-reference(s): 2
OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L35 ANSWER 31 OF 31 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1981:116215 HCAPLUS Full-text
DOCUMENT NUMBER: 94:116215
ORIGINAL REFERENCE NO.: 94:18915a,18918a
TITLE: Nucleotides adjacent to N6-methyladenosine in maize poly(A)-containing RNA
AUTHOR(S): Nichols, J. L.; Welder, L.
CORPORATE SOURCE: Dep. Biochem. Microbiol., Univ. Victoria, Victoria, BC, V8W 2Y2, Can.
SOURCE: Plant Science Letters (1981), 21(1), 75-81
CODEN: PTSLAF; ISSN: 0304-4211
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Poly(A)-containing RNA was isolated from corn seedlings by affinity chromatog. on columns of oligo(dT)-cellulose. Information concerning the nature of the nucleotides surrounding N6-methyladenosine (I) was obtained by radioactive labeling in vitro of the 5' termini of oligonucleotides liberated by digestion of the RNA with base-specific RNases. The major sequence containing I was Pu-I-C, where Pu = purine nucleotide.
CC 6-2 (General Biochemistry)
IT 1867-73-8
RL: BIOL (Biological study)
(in messenger RNA, sequence of oligonucleotides containing, of corn)
IT 1867-73-8
RL: BIOL (Biological study)
(in messenger RNA, sequence of oligonucleotides containing, of corn)
RN 1867-73-8 HCAPLUS
CN Adenosine, N-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

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=> FILE HCAPLUS
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FILE COVERS 1907 - 20 Apr 2010  VOL 152 ISS 17
FILE LAST UPDATED: 18 Apr 2010  (20100418/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Feb 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Feb 2010

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the first quarter of 2010.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE
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=> D STAT QUE L32

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L3             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "GUANOSINE, 2'-DEOXY-
                 6-O-METHYL-"/CN
L5             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "9H-PURINE, 2-AMINO-9
                 -(2-DEOXY-B-D-ERYTHRO-PENTOFURANOSYL)-6-METHOXY-"/CN
L6             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "9H-PURINE, 2-AMINO-9
                 -(2-DEOXY-B-D-RIBOFURANOSYL)-6-METHOXY-"/CN
L7             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "2-AMINO-6-METHOXY-9-
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L8             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "2'-DEOXY-6-METHYLGUA
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                 UANOSINE"/CN
L10            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "6-O-METHYLDEOXYGUANO
                 SINE"/CN
L11            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "O6-METHYL-2'-DEOXYGU
                 ANOSINE"/CN
L12            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "O6-METHYLDEOXYGUANOS
                 INE"/CN
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                 L7 OR L8 OR L9 OR L10 OR L11 OR L12) OR L16
L19          535 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L16 OR L18
L20         1993 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L19
L30        16956 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  SATO Y?/AU
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L31       15574 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  KOBAYASHI H?/AU
L32           3 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L20 AND (L30 OR L31)


=> D STAT QUE L34
L30       16956 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  SATO Y?/AU
L31       15574 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  KOBAYASHI H?/AU
L33          59 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L30 AND L31
L34          35 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L33 AND (PRY<=2003 OR
                AY<=2003 OR PY<=2003 OR PD<=2003)


=> DUP REMOVE L32 L34
PROCESSING COMPLETED FOR L32
PROCESSING COMPLETED FOR L34
L37          38 DUP REMOVE L32 L34 (0 DUPLICATES REMOVED)
                ANSWERS '1-38' FROM FILE HCAPLUS

=> D L37 IBIB ABS HITIND HITSTR 1-38

L37  ANSWER 1 OF 38  HCAPLUS  COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER:         2009:572809  HCAPLUS  Full-text
TITLE:                    Anchor for flaking prevention [Machine Translation].
INVENTOR(S):              Sato, Yutaka; Sasaki, Takahiko; Konishi,
                          Shinji; Kobayashi, Hitoshi; Mizuno, Masashi
PATENT ASSIGNEE(S):       Railway Technical Research Institute, Japan
SOURCE:                   Jpn. Tokkyo Koho, 10pp.
                          CODEN: JTXXFF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     JP 4263967            B2    20090513    JP 2003-309874          20030902 <--
PRIORITY APPLN. INFO.:                       JP 2003-309874          20030902 <--
AB    [Machine Translation of Descriptors].  When there is a surface piece which is
      possibility of flaking in portion of the surface section of the structure, being the
      anchor for flaking prevention which prevents flaking of this surface piece, in the
      aforementioned structure, this crossing in the said frame by  doing the basic end
      which the frame and this frame where the point is buried is locked when the basic
      end has extended from that surface have extended as it is installed, it has with the
      support section which the point approaches to the aforementioned surface piece with
      the specified opening as for the aforementioned frame, it possesses the male screw
      section in that basic end, in the point outside the radial directionIt possesses the
      diameter expansion possible diameter expansion section, as for this diameter
      expansion section, below being formed to the structure, inserting the point of
      aforementioned frame in the hole, spiral shellfish combination doing the nut in the
      aforementioned male screw section, the aforementioned frame moves to basic edge side
      as, by the thing which it turns, diameter expansion the anchor for flaking
      prevention which features that it does.


L37  ANSWER 2 OF 38  HCAPLUS  COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER:         2005:428362  HCAPLUS  Full-text
DOCUMENT NUMBER:          142:464788
TITLE:                    Fire-resistant vibration dampers with good flexibility
INVENTOR(S):              Kobayashi, Hisaaki; Sato, Yoichi;
                          Hayashi, Koji
PATENT ASSIGNEE(S):       CCI Corp., Japan
```

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005126634	A	20050519	JP 2003-365813	20031027 <--
JP 4377200	B2	20091202		

PRIORITY APPLN. INFO.: JP 2003-365813 20031027 <--

AB The vibration dampers comprise (A) 100 parts polymers, (B) 50-180 parts metal hydroxides, (C) 3-20 parts red P, and (D) 50-200 parts inorg. fillers. Thus, a composition containing Novatec PP-EG 7F (propylene polymer) 60, R 110MP (polyolefin elastomer) 36, HN 1000M (acrylonitrile polymer, acrylonitrile content 95%) 4, B 303 [Al(OH)3] 130, Nova Excel 140 (red P) 12, Clarite Mica 60C (mica) 100, and TVP 0623 BLACK (carbon black) 2 parts was extruded to give a sheet showing UL 94 rating V-0, yield strength (JIS K 7113) 19.8 MPa, loss factor at 20° 0.09, and good bending resistance.

IC ICM C08L101-00
ICS C08K003-22; C08K003-32; C08K003-34; C08L023-00; C08L033-20
CC 38-3 (Plastics Fabrication and Uses)

L37 ANSWER 3 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:428361 HCAPLUS Full-text
DOCUMENT NUMBER: 142:464506
TITLE: Fire-resistant polymer compositions with good flexibility
INVENTOR(S): Kobayashi, Hisaaki; Sato, Yoichi; Hayashi, Koji
PATENT ASSIGNEE(S): CCI Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005126633	A	20050519	JP 2003-365812	20031027 <--

PRIORITY APPLN. INFO.: JP 2003-365812 20031027 <--

AB The compns. comprise (A) 100 parts matrix polymers containing (a) polyolefins and (b) acrylonitrile polymers with acrylonitrile content ≥85%, (B) 80-180 parts metal hydroxides, (C) 3-20 parts red P, and optionally (D) 1-5 parts carbon black. Thus, a composition containing Novatec PP-EG 7F (propylene polymer) 60, R 110MP (polyolefin elastomer) 34, HN 1000M (acrylonitrile polymer, acrylonitrile content 95%) 6, B 303 [Al(OH)3] 120, Nova Excel 140 (red P) 12, and TVP 0623 BLACK (carbon black) 2 parts was extruded to give a test piece showing UL 94 rating V-0, yield strength (JIS K 7113) 11.4 MPa, elongation at break 11%, and good bending resistance.

IC ICM C08L023-00
ICS C08K003-02; C08K003-22; C08L033-20
CC 37-6 (Plastics Manufacture and Processing)

L37 ANSWER 4 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2004:927226 HCAPLUS Full-text
DOCUMENT NUMBER: 141:388675
TITLE: Guanine methylated oligo-DNA containing CpG motifs

alleviates collagen-induced arthritis in mice, use as immunosuppressant
INVENTOR(S): Sato, Yukio; Kobayashi, Hiroko
PATENT ASSIGNEE(S): Taisho Pharmaceutical Co. Ltd., Japan
SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004094448	A1	20041104	WO 2004-JP5935	20040423 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 20080200407	A1	20080821	US 2005-553948	20051021 <--
PRIORITY APPLN. INFO.:			JP 2003-118999 A	20030423 <--
			WO 2004-JP5935 W	20040423

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Polynucleotides capable of effectively suppressing the immunoactivity attributed to DNA having a CpG motif, to thereby find application in the prevention and/or treatment of immunol. diseases such as arthritis, are provided. In particular, polynucleotides comprising a CpG motif having a methylated guanine, and a pharmaceutical composition comprising the polynucleotide, are provided. To investigate the effects of an intradermal injection of an methylated oligodeoxynucleotide (ODN) containing CpG motifs on the severity of collagen-induced arthritis (CIA), methylated ODN containing a CpG motif was injected intradermally into DBA/1 LacJ mice at a dosage of 20 μg (yielding CpmG-CIA mice) 1 wk prior to the first immunization with bovine type II collagen (CII). CpmG-CIA mice had significantly lower arthritis scores than CIA mice or CpG-CIA mice. CpmG-CIA mice had less severe histopathol. changes than CIA mice and CpG-CIA mice. Moreover, splenocytes in CpG-CIA mice produced higher IFNγ titers in response to CII than did splenocytes in CIA mice and mCpG-CIA mice. Injection of methylated oligo-DNA containing CpG motifs alleviated CIA through activation of the Th1-type immune response, suggesting that microbial infection could be one of the mechanisms for aggravation or exacerbation of arthritis or, alternatively, that such infection could be an adjuvant in the induction of arthritis in rheumatoid arthritis. Moreover, administration of methylated CpG ODN to mouse bone marrow-derived macrophages suppressed IL-6 and IL-12 production

IC ICM C07H021-02
ICS C07H021-04; A61K031-7115; A61P037-06; A61P019-02; A61P043-00; A61P029-00; A61P003-10; A61P025-00; A61P007-06; A61P021-04; A61P017-00; A61P001-04; A61P011-06; A61P037-08; A61P031-04; A61P009-10; C12N015-11
CC 1-7 (Pharmacology)
Section cross-reference(s): 3, 14, 15
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 5 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2004:990354 HCAPLUS Full-text
TITLE: Deflection mirror [Machine Translation].
INVENTOR(S): Kobayashi, Hiroki; Tsuboi, Osamu; Sato, Yuichi; Sawaki, Ippei; Yamagishi, Fumio
PATENT ASSIGNEE(S): Fujitsu Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004325578	A	20041118	JP 2003-117178	20030422 <--

PRIORITY APPLN. INFO.: JP 2003-117178 20030422 <--

AB [Machine Translation of Descriptors]. Having the plane mirror section where the surface becomes counter plane of fire in the beam section, as it can make the distortion of counter plane of fire of the plane mirror section small, in regard to the deflection mirror which tilt possibly it supports, it actualizes the deflection mirror which it can correspond to also acceleration. beam section 2,3 is arranged, in order to put plane mirror section 1 from the side, the inside edge is connected to the angular section of outer circle of plane mirror section 1. beam section 2,3, having with the being twisted of the beam, is something which makes the tilt of plane mirror section 1 possible. Base 6 is connected to the outer edge of beam section 2,3. The rib 7 which reinforces plane mirror section 1 is provided on back side of plane mirror section 1. Height of the back of this rib 7 is formed in order height H1 of the rib 7 which is the position where it is far from the tilt central axis (central axis L1 of being twisted of beam section 2,3) of plane mirror section 1 to become lower than height H2 of tilt central axial L1 adjacent rib 7.

IC ICM G02B026-10
ICS B81B003-00

L37 ANSWER 6 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2004:1054339 HCAPLUS Full-text
DOCUMENT NUMBER: 142:45845
TITLE: Carrier for use in electrophotographic developers
INVENTOR(S): Kamikoriyama, Yoichi; Suzuoka, Kenji; Nakashima, Takashi; Kinoshita, Kazuya; Sato, Yuji; Kobayashi, Hiromichi; Gondo, Takeshi; Hikichi, Takashi
PATENT ASSIGNEE(S): Mitsui Mining & Smelting Co., Ltd, Japan; Powdertech Co., Ltd.
SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1484648	A2	20041208	EP 2004-253342	20040604 <--
EP 1484648	A3	20051207		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
JP 2004361594	A	20041224	JP 2003-158860	20030604 <--
JP 4109576	B2	20080702		
US 20040248015	A1	20041209	US 2004-861083	20040604 <--
US 7288355	B2	20071030		

PRIORITY APPLN. INFO.: JP 2003-158860 A 20030604 <--

AB Provided are a carrier for electrophotog. developers prepared with generating a slight amount of byproducts such as water, alc., etc, which carrier is free from release of a magnetic powder, has excellent mech. strength and durability, and good environmental stability, and further can restrain occurrence of toner spent condition and has favorable fluidity and excellent capability of imparting charging to a toner, a two-component developer comprising the carrier and a method for forming an image using the developer. The carrier for electrophotog. developers of the invention comprises a magnetic powder dispersed binder resin, the binder resin material comprises (A) a polysiloxane compound having an epoxy group as a functional group and (B) a polysiloxane compound having a group capable of ring-opening addition reaction with the epoxy group of the polysiloxane compound (A), and the binder resin is a silicone resin prepared by curing with ring-opening addition reaction of the epoxy resin. The developer of the invention comprises the carrier for electrophotog. developers and the toner particle. The method for forming an image according to the invention comprises developing a static latent image by the developer with an alternating elec. field.

IC ICM G03G009-10
ICS G03G009-113

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 7 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2004:650956 HCAPLUS Full-text

DOCUMENT NUMBER: 141:197313

TITLE: Electrophotographic coated carrier and two-component developer

INVENTOR(S): Shinmura, Issei; Kobayashi, Hiromichi; Itagoshi, Tsuyoshi; Sato, Yuji

PATENT ASSIGNEE(S): Powdertech Co. Ltd., Japan

SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1445657	A2	20040811	EP 2004-250655	20040206 <--
EP 1445657	A3	20060920		
EP 1445657	B1	20080702		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004240322	A	20040826	JP 2003-31408	20030207 <--
JP 3872025	B2	20070124		
US 20040185366	A1	20040923	US 2004-774045	20040206 <--
US 7183033	B2	20070227		

PRIORITY APPLN. INFO.: JP 2003-31408 A 20030207 <--

AB Disclosed is a carrier core material for an electrophotog. developing agent, which comprises 100 parts by weight of a ferrite component represented by the formula (A): (MnO)x(MgO)y(Fe2O3)2 (x, y and z are each expressed in % by mol and are nos. satisfying the conditions of 40≤x≤60, 0.1≤y≤10 and x+y+z = 100) and 0.1-5.0 parts by weight of ZrO2 that is present in the ferrite component without forming a solid solution, and which has a magnetization at 1000(103/4πuA/m) of 65-85 Am2/kg, and an

elec. resistance at an applied voltage of 1000 V of 105-109 Ω. (MnO)x(MgO)y(Fe2O3)z wherein x, y and z are each expressed in % by mol and are nos. satisfying the conditions of 40≤x≤60, 0.1≤y≤10 and x+y+z = 100. Also disclosed is a two-component developing agent comprising a coated carrier, which is obtained by coating the above carrier core material with a resin, and toner particles. Further disclosed is an image forming method comprising developing an electrostatic latent image formed by the use of an alternating elec. field, with the two-component developing agent. The carrier core material and the coated carrier have high magnetization and high resistance. According to the two-component developing agent of the invention, an excellent image can be formed.

IC ICM G03G009-113
ICS G03G009-10

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 8 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2004:650955 HCAPLUS Full-text

DOCUMENT NUMBER: 141:197312

TITLE: Electrophotographic carrier core material and two-component developer

INVENTOR(S): Kobayashi, Hiromichi; Shinmura, Issei; Itagoshi, Tsuyoshi; Sato, Yuji

PATENT ASSIGNEE(S): Powdertech Co. Ltd., Japan

SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1445656	A2	20040811	EP 2004-250659	20040206 <--
EP 1445656	A3	20060920		
EP 1445656	B1	20081105		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004240321	A	20040826	JP 2003-31407	20030207 <--
JP 3872024	B2	20070124		
US 20040229151	A1	20041118	US 2004-773559	20040206 <--
US 7553597	B2	20090630		

PRIORITY APPLN. INFO.: JP 2003-31407 A 20030207 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Disclosed is an electrophotog. carrier core material containing at least one metal oxide (MLO) having a m.p. of ≤ 1000°C and at least one metal oxide (MHO) having a m.p. ≥ 1800°C, wherein the metal (MH) for constituting the metal oxide (MHO) has an elec. resistivity of ≥ 10-5 Ωucm. Also disclosed is a two-component developing agent comprising a coated carrier, which comprises the carrier core material coated with a resin, and toner particles. Further disclosed is an image forming method comprising developing an electrostatic latent image formed on a photosensitive member with the two-component developing agent using an alternating elec. field. The carrier core material and the coated carrier have high magnetization and are free from occurrence of leakage of elec. charge over a wide range of elec. field from low elec. field to high elec. field. The two-component developing agent of the invention has an excellent image forming properties.

IC ICM G03G009-10

ICS G03G009-113
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 9 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2004:181891 HCAPLUS Full-text
DOCUMENT NUMBER: 140:225772
TITLE: Dry two-component type developer for electrophotography
INVENTOR(S): Naito, Tekeshi; Itagoshi, Tsuyoshi; Kobayashi, Hiromichi; Sato, Yuji
PATENT ASSIGNEE(S): Powdertech Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1394621	A2	20040303	EP 2003-255462	20030902 <--
EP 1394621	A3	20051102		
EP 1394621	B1	20080521		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004094035	A	20040325	JP 2002-256783	20020902 <--
JP 4195593	B2	20081210		
US 20040043320	A1	20040304	US 2003-653598	20030902 <--
US 6905806	B2	20050614		
PRIORITY APPLN. INFO.:			JP 2002-256783 A	20020902 <--

AB The present invention provides a dry two-component type developer for electrophotog. comprising a carrier particle and a toner particle, wherein a toner water adsorption ratio (T) obtained by a following equation (1): a toner water adsorption ratio (T) = [a water adsorption amount (TH) of the toner particle/ an N2 adsorption amount (TN) of the toner particle] for the toner particle ranges from 1.0-7.0 and a carrier water adsorption ratio (C) obtained by a following equation (2): a carrier water adsorption ratio (C) = [a water adsorption amount (CH) of the carrier particle/ an N2 adsorption amount (CN) of the carrier particle] is 20. 0 or less, and a water adsorption ratio (T/C) expressed in a following equation (3): a water adsorption ratio (T/C) = [a toner water adsorption ratio (T)/ a carrier water adsorption ratio (C)] representing a relationship between the toner water adsorption ratio (T) and the carrier water adsorption ratio(C) is 5.0 or less. In the dry two-component type developer for electrophotog. according to the present invention, even if use conditions are changed, a developing characteristic is less varied.

IC ICM G03G009-08
ICS G03G009-10; G03G009-107; G03G009-113
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 10 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:147984 HCAPLUS Full-text
DOCUMENT NUMBER: 138:205218
TITLE: Method for preparation of diorganodichlorosilane by disproportionation reaction of organochlorosilane and

hydrocarbylsilane or hydrocarbylchlorosilane in presence of aluminum bromide or chloride
INVENTOR(S): Chikuno, Akito; Kobayashi, Hiroyuki; Sato, Yukinori; Ozeki, Hideaki; Shinanta, Yoshihiro; Ueno, Susumu
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003055387	A	20030226	JP 2001-247800	20010817 <--
JP 3829921	B2	20061004		
US 20030109735	A1	20030612	US 2002-218558	20020815 <--
US 6632956	B2	20031014		

PRIORITY APPLN. INFO.: JP 2001-247800 A 20010817 <--
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): CASREACT 138:205218; MARPAT 138:205218
AB Diorganodichlorosilanes are prepared by disproportionation reaction of organochlorosilane in the copresence of compds. containing hydrogen directly bonded to a silicone atom in the presence of $AlCl_3$ or $AlBr_3$ (main catalyst) and a cocatalyst at least one metal or metal compound selected from Mg, Al, Ca, Ti, Fe, Ni, Cu, Zn, Sn, and metal compds. thereof excluding $AlCl_3$ and $AlBr_3$. The metal compds. are alloys, oxides, chlorides, carbonates, sulfates, or hydroxides. The compds. containing hydrogen directly bonded to a silicone atom are represented by general formula $R_aH_bSiCl_{4-a-b}$ (wherein R = a monovalent hydrocarbyl; a = an integer of 0-3; b = an integer of 1-4, provided that a+b is an integer of 1-4). The temperature of disproportionation reaction is ≤100°. This process allows disproportionation reaction to precced at low temperature which substantially avoids the sublimation of $AlCl_3$, simplifies a manufacturing apparatus, and markedly improves the safely of the reaction. It converts less useful organochlorosilanes such as organotrichlorosilanes, triorganochlorosilanes, and organodichlorosilanes into the most useful diorganodichlorosilanes. Thus, tetramethylsilane 88, methyltrichlorosilane 150, methyldichlorosilane 46, $AlCl_3$ 46, and MgO 15 g were stirred at 42° for 5 h and cooled to room temperature over 1 h to give tetramethylsilane 0, methyldichlorosilane 1.7, trimethylchlorosilane 17.6, methyltrichlorosilane 6.7, and dimethyldichlorosilane 62.1 g in 88.0% yield for dimethyldichlorosilane vs. 8.2% without MgO.
IC ICM C07F007-12
ICS C07B061-00
CC 29-6 (Organometallic and Organometalloidal Compounds)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L37 ANSWER 11 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:220514 HCAPLUS Full-text
DOCUMENT NUMBER: 138:229241
TITLE: Carrier for electrophotographic developer and developer containing the same
INVENTOR(S): Kobayashi, Hiromichi; Itagoshi, Tsuyoshi; Naito, Takeshi; Sato, Yuji
PATENT ASSIGNEE(S): Powdertech Co. Ltd., Japan
SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1293840	A1	20030319	EP 2002-13903	20020621 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 20030091923	A1	20030515	US 2002-173784	20020619 <--
US 6686113	B2	20040203		
JP 2003167390	A	20030613	JP 2002-270942	20020918 <--
JP 3904205	B2	20070411		

PRIORITY APPLN. INFO.: JP 2001-282835 A 20010918 <--
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB A resin-coated carrier to be mixed with a polymer toner obtained by suspension polymerization or emulsion polymerization to provide an electrophotog. developer, which exposes 2 to 20% of the surface area of the core thereof, the average exposed area ratio per exposed part of the core being 0.03% or less.
IC ICM G03G009-113
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 12 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:290557 HCAPLUS Full-text
DOCUMENT NUMBER: 139:20716
TITLE: Future prospect of DNA vaccine
AUTHOR(S): Sato, Yukio; Kobayashi, Hiroko
CORPORATE SOURCE: School of Medicine, Second Dep. of Internal Medicine, Fukushima Prefectural Medical University, Japan
SOURCE: Arerugi, Men'eki (2003), 10(3), 294-301
CODEN: ARMEFS; ISSN: 1344-6932
PUBLISHER: Iyaku Janarusha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review discusses the antigen-specific immunotherapy for induction of Th1 type immune responses with immunostimulatory DNA sequence such as CpG in treatment of allergy.
CC 15-0 (Immunochemistry)

L37 ANSWER 13 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:236681 HCAPLUS Full-text
DOCUMENT NUMBER: 138:352330
TITLE: DNA vaccination for allergic diseases
AUTHOR(S): Kobayashi, Hiroko; Sato, Yukio
CORPORATE SOURCE: School of Medicine, Second Dep. of Internal Medicine, Fukushima Prefectural Medical University, Japan
SOURCE: Chiryogaku (2003), 37(1), 74-76
CODEN: CHRYDT; ISSN: 0386-8109
PUBLISHER: Raifu Saiensu Shuppan K.K.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review on DNA based immunotherapy for treatments of allergic diseases discussing (1) desensitization and DNA vaccination; (2) suppression of allergic response by DNA vaccination; and (3) DNA based immunotherapy.
CC 15-0 (Immunochemistry)

L37 ANSWER 14 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2002:65867 HCAPLUS Full-text
DOCUMENT NUMBER: 136:126523
TITLE: Electrophotographic two-component developer and apparatus for electrophotographic image formation using same
INVENTOR(S): Nakamura, Yasunari; Ishimaru, Seijiro; Katagiri, Yoshimichi; Sato, Yuji; Itagoshi, Takeshi; Kobayashi, Hiromichi
PATENT ASSIGNEE(S): Fujitsu Ltd., Japan; Powder Tech K. K.; Fuji Xerox Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002023429	A	20020123	JP 2000-207557	20000707 <--
JP 3788726	B2	20060621		
US 20020064724	A1	20020530	US 2001-768290	20010125 <--
US 6544707	B2	20030408		
DE 10103723	A1	20020214	DE 2001-10103723	20010126 <--
DE 10103723	B4	20051201		

PRIORITY APPLN. INFO.: JP 2000-207557 A 20000707 <--
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB The title developer contains a carrier, which is made of magnetic particles coated with a resin, and insulative toner particles, wherein the magnetic particles have 30-90 μm average diams. and wherein the carrier has 2-15 % of the aggregation degree. The developer, which contains the aforementioned carrier, provides the good image quality in high speed printing mode for long time.
IC ICM G03G009-113
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L37 ANSWER 15 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2002:752433 HCAPLUS Full-text
DOCUMENT NUMBER: 137:270500
TITLE: Carrier for electrophotographic developer and developer containing the same
INVENTOR(S): Kobayashi, Hiromichi; Itagoshi, Tsuyoshi; Kataoka, Yasuhiko; Sato, Yuju
PATENT ASSIGNEE(S): Powdertech Co. Ltd., Japan
SOURCE: Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1246025	A1	20021002	EP 2002-6641	20020325 <--
EP 1246025	B1	20041229		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

US 20020177061	A1	20021128	US 2002-59004	20020130 <--
US 6627369	B2	20030930		
JP 2002357930	A	20021213	JP 2002-53220	20020228 <--
JP 3884978	B2	20070221		

PRIORITY APPLN. INFO.: JP 2001-99812 A 20010330 <--
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB A carrier for an electrophotog. developer which has a flowability index F1 = AD x FR (AD = apparent d. (g/cm3); FR = flow rate (sec/50 g), of 63-75 s/(50·cm3) and a flowability index F2 = AD x Hc (Hc = coercive force (Oe), of 30-100 Oe·g/cm3. The present invention provides a carrier for electrophotog. developer which exhibit satisfactory flowability in a mixing zone and on a sleeve, are free from carrier adhesion, toner scattering and fog, and provides high image quality in terms of image d., fine line or dot reproducibility.
IC ICM G03G009-113
ICS G03G009-107
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 16 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:526326 HCAPLUS Full-text
DOCUMENT NUMBER: 135:101046
TITLE: Method for writing data to semiconductor memory and semiconductor memory device fabrication
INVENTOR(S): Niimi, Masahiro; Sato, Yasuharu; Aikawa, Tadao; Ikeda, Hitoshi; Kobayashi, Hiroyuki
PATENT ASSIGNEE(S): Fujitsu Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 16 pp., Cont. of Appl. No. PCT/JP98/05227.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20010008281	A1	20010719	US 2001-763627	20010306 <--

PRIORITY APPLN. INFO.: WO 1998-JP9905227 A1 19980924 <--
JP 1998-271970 A 19980925 <--
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB A semiconductor memory device that performs a flash write operation without increasing the circuit area. Column selection lines extend parallel to word lines at locations corresponding to where column gates are formed. During a flash write mode, the subcolumn decoder simultaneously selects the column selection lines. This writes cell information to every memory cell connected to the selected word line.
IC H01L047-00; G11C008-00
INCL 257001000
CC 76-3 (Electric Phenomena)

L37 ANSWER 17 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:246749 HCAPLUS Full-text
DOCUMENT NUMBER: 134:273539
TITLE: Carrier for electrophotographic development and electrophotographic developer
INVENTOR(S): Matsuda, Shinichi; Kobayashi, Hiromichi; Sato, Yuji
PATENT ASSIGNEE(S): Powder Tech K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001092190	A	20010406	JP 1999-271333	19990924 <--
PRIORITY APPLN. INFO.:			JP 1999-271333	19990924 <--

AB The title carrier comprises a carrier core, the surface of which is coated by ≥2 layers of an acrylic resin having a glass transition temperature 80-120°. The acrylic resin may contain an elec. conductive agent. The electrophotog. developer consisting of the carrier and the toner is also claimed. The surface of core is little exposed so that the stable property of the carrier can be obtained.
IC ICM G03G009-113
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

L37 ANSWER 18 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:667855 HCAPLUS Full-text
DOCUMENT NUMBER: 136:214490
TITLE: Chromosomal instability in chromosome band 12p13: multiple breaks leading to complex rearrangements including cytogenetically undetectable sub-clones
AUTHOR(S): Sato, Y.; Kobayashi, H.; Suto, Y.; Olney, H. J.; Davis, E. M.; Super, H. Gill; Espinosa, R., III; Le Beau, M. M.; Rowley, J. D.
CORPORATE SOURCE: Division of Molecular Cytogenetics, Research Institute of International Medical Center of Japan, Tokyo, Japan
SOURCE: Leukemia (2001), 15(8), 1193-1202
CODEN: LEUKED; ISSN: 0887-6924
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB During fluorescence in situ hybridization (FISH) anal. of metaphase cells from 70 patients with lymphoid and myeloid hematol. malignancies and chromosomal rearrangements involving band 12p13, the authors identified nine patients (four with lymphoid malignancies, four with myeloid malignancies and one with biphenotypic leukemia) who showed more complicated rearrangements than the authors had expected from conventional cytogenetic study. In six patients, multiple breaks occurred in small segments of 12p with subsequent translocations and insertions of these segments into other chromosomes, sometimes to unexpected regions. In three patients addnl. chromosome breaks resulted in a sub-clone which was cytogenetically indistinguishable from the main clone in each patient based on the cytogenetic anal. These subtle mol. events were detected exclusively in a region covering TEL/ETV6 and KIP1/CDKN1B. Seven of nine had a previous history of chemo/radiotherapy; all the patients showed complex karyotypes, even though they were newly diagnosed with leukemia. Survival data were available in five patients, and all survived less than 6 mo. These findings suggest that the 12p13 region, especially the above-mentioned region, is genetically unstable and fragile. It is likely that multiple chromosome breaks were induced through mutagens used in chemo/radiotherapy, and are associated with a sub-group of patients with an extremely bad prognosis.
CC 14-1 (Mammalian Pathological Biochemistry)
Section cross-reference(s): 3
OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)
REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 19 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:539064 HCAPLUS Full-text
DOCUMENT NUMBER: 136:133063
TITLE: Immunostimulatory DNA sequence
AUTHOR(S): Sato, Yukio; Kobayashi, Hiroko
CORPORATE SOURCE: Department of Internal Medicine II, Fukushima Medical University School of Medicine, Fukushima, 960-1295, Japan
SOURCE: Kokyu (2001), 20(5), 464-469
CODEN: KOKUDH; ISSN: 0286-9314
PUBLISHER: Respiration Research Foundation
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review. Immunostimulatory DNA sequences (ISS) with CpG motifs, role of ISS in innate immunity, ISS in promoting CD4+ helper T cell responses, applications of ISS treatment to DNA vaccines, allergic disorders, and to promote Th1 responses, and roles of ISS in septic shock, cystic fibrosis, and diffuse panbronchiolitis are discussed.
CC 15-0 (Immunochemistry)

L37 ANSWER 20 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2000:858483 HCAPLUS Full-text
DOCUMENT NUMBER: 134:279449
TITLE: Unmethylated oligo-DNA containing CpG motifs aggravates collagen-induced arthritis in mice
AUTHOR(S): Miyata, Masayuki; Kobayashi, Hiroko; Sasajima, Tomomi; Sato, Yukio; Kasukawa, Reiji
CORPORATE SOURCE: Fukushima Medical University School of Medicine, Fukushima City, 960-1295, Japan
SOURCE: Arthritis & Rheumatism (2000), 43(11), 2578-2582
CODEN: ARHEAW; ISSN: 0004-3591
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To investigate the effects of an intradermal injection of an unmethylated oligodeoxynucleotide (ODN) containing CpG motifs on the severity of collagen-induced arthritis (CIA). CIA was induced in DBA/1 LacJ mice by immunization with bovine type II collagen (CII) in Freund's complete adjuvant followed 3 wk later by immunization with CII in Freund's incomplete adjuvant (yielding CIA mice). Unmethylated ODN containing a CpG motif was injected intradermally into DBA/1 LacJ mice at a dosage of 20 μg (yielding CpG-CIA mice) 1 wk prior to the first immunization with CII. Unmethylated ODN containing a GpC motif instead of a CpG motif and ODN containing a methylated CpG motif were used to produce controls (GpC-CIA mice and mCpG-CIA mice, resp.). After the second immunization with CII, arthritis scores were measured weekly up to the eighth week. At the eighth week, the mice were killed, histopathol. changes in the ankle joints were examined, and titers of interferon-γ (IFNγ) in the supernatants of splenocytes (1 + 107) stimulated in culture by CII for 3 days were determined by ELISA. CpG-CIA mice had significantly higher arthritis scores than CIA mice. CpG-CIA mice had more severe histopathol. changes than CIA mice and mCpG-CIA mice. Moreover, splenocytes in CpG-CIA mice produced higher IFNγ titers in response to CII than did splenocytes in CIA mice and mCpG-CIA mice. Injection of unmethylated oligo-DNA containing CpG motifs aggravated CIA through activation of the Th1-type immune response, suggesting that microbial infection could be one of the mechanisms for aggravation or exacerbation of arthritis or, alternatively, that such infection could be an adjuvant in the induction of arthritis in rheumatoid arthritis.

CC 15-8 (Immunochemistry)
Section cross-reference(s): 1, 3, 14
OS.CITING REF COUNT: 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 21 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:572123 HCAPLUS Full-text
DOCUMENT NUMBER: 131:206942
TITLE: Electrophotographic carrier with stable charge and flow characteristics and developer containing the carrier
INVENTOR(S): Matsuda, Shinichi; Sato, Yuji; Kobayashi, Hiromichi; Kataoka, Yasuhiko; Uemura, Tetsuya; Honjo, Toshio
PATENT ASSIGNEE(S): Powder Tech K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11242361	A	19990907	JP 1998-344077	19981203 <--
US 6071663	A	20000606	US 1998-220377	19981224 <--

PRIORITY APPLN. INFO.: JP 1997-360880 A 19971226 <--
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 131:206942
AB The developer comprises a toner and a carrier whose core is covered with a silicone resin containing a Ph-substituted crosslinking agent. The carrier shows charge and flow characteristics not influenced by environment conditions, i.e., stable at high temperature and high humidity and the developer containing the carrier prevents the image from decreasing color d.
IC ICM G03G009-113
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 42
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L37 ANSWER 22 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:425698 HCAPLUS Full-text
DOCUMENT NUMBER: 131:52004
TITLE: Carrier for electrophotographic developer
INVENTOR(S): Kobayashi, Hiromichi; Sato, Yuji; Honjo, Toshio
PATENT ASSIGNEE(S): Powdertech Co. Ltd., Japan
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 926566	A1	19990630	EP 1998-123566	19981210 <--
EP 926566	B1	20040804		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP 11242363	A	19990907	JP 1998-344076	19981203 <--
JP 3865518	B2	20070110		
US 6124068	A	20000926	US 1998-220378	19981224 <--
PRIORITY APPLN. INFO.:			JP 1997-360879 A	19971226 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB A carrier for an electrophotog. developer comprises a core coated with a silicone resin containing a quaternary ammonium salt as a catalyst.

IC ICM G03G009-113

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 23 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2000:65032 HCAPLUS Full-text

DOCUMENT NUMBER: 132:201187

TITLE: A study on low-temperature crystallization of $SrBi_2Ta_2O_9$ thin films prepared by sol-gel method using steam curing process

AUTHOR(S): Sawada, Yoshihiro; Kobari, Hideya; Sato, Yoshimi; Hashimoto, Akira; Koiwa, Ichiro; Kobayashi, Hiroyo; Osaka, Tetsuya

CORPORATE SOURCE: Tokyo Ohka Kogyo Co., Ltd., Kanagawa, 253-0114, Japan

SOURCE: Integrated Ferroelectrics (1999), 26(1-4), 889-897
CODEN: IFEREU; ISSN: 1058-4587

PUBLISHER: Gordon & Breach Science Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors were developing the authors' original hydrolyzed sol-gel coating solns. for the $SrBi_2Ta_2O_9$ (SBT) thin film. The mol. structure of the solution can be controlled by hydrolysis. The authors studied the SBT thin film forming process using these coating solns. with the steam curing process used together and observed lower crystallization temperature and improvement of crystal orientation.

CC 75-1 (Crystallography and Liquid Crystals)

L37 ANSWER 24 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1999:581631 HCAPLUS Full-text

DOCUMENT NUMBER: 131:350108

TITLE: Cytokine production by rabbit alveolar macrophages: differences between activated and suppressor cell phenotypes

AUTHOR(S): Kobayashi, N.; Kobayashi, M.; Heming, T. A.; Bidani, A.; Pollard, R. B.; Suzuki, F.

CORPORATE SOURCE: Department of Internal Medicine, The University of Texas Medical Branch, Galveston, TX, USA

SOURCE: Immunology Letters (1999), 69(3), 339-346
CODEN: IMLED6; ISSN: 0165-2478

PUBLISHER: Elsevier Science Ireland Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The differences between cytokine-producing profiles of activated macrophages (A-Mϕ) and suppressor macrophages (S-Mϕ) were examined A-Mϕ, which exhibited cytotoxicity against RK-13 cells, were generated from resident rabbit alveolar Mϕ by treatment with lymphokine solution (culture fluids of rabbit spleen cells stimulated with Con A). S-Mϕ, which were able to inhibit cellular proliferations of rabbit spleen cells

stimulated with Con A, were generated from resident alveolar Mϕ by treatment with 1-methyladenosine (an immunosuppressive mol. in tumorous ascites fluids). When A-Mϕ were stimulated with lipopolysaccharide (LPS) in vitro, the cells produced significantly more interleukin (IL)-1 (.apprx.1.4 times), IL-6 (.apprx.2.1 times), IL-12 (.apprx.60 times), and tumor necrosis factor-α (TNF-α) (.apprx.37 times) than did resting macrophages (R-Mϕ) stimulated with LPS as control cells. After the stimulation with LPS, both A-Mϕ and R-Mϕ did not produce transforming growth factor-β (TGF-β). In contrast, when S-Mϕ were stimulated with LPS in vitro, the cells produced significantly more TGF-β (.apprx.1.6 times) and significantly less IL-6 (.apprx.1.8 times) than did control cells. Also, S-Mϕ did not produce IL-1, IL-12, and TNF-α into their culture fluids after the stimulation with LPS. These results show the differences between cytokine-producing profiles of A-Mϕ and S-Mϕ, and characteristics of their cytokine-producing profiles are analogous to T cell subsets. Differences displayed in the cytokine profiles may contribute to the effector (A-Mϕ) or the suppressor (S-Mϕ) functions of alveolar Mϕ.

CC 15-5 (Immunochemistry)

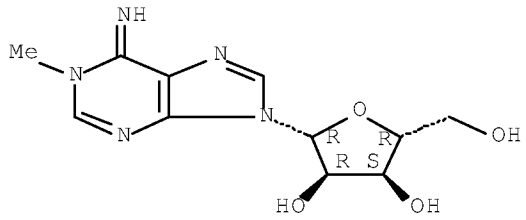
IT 11028-71-0, Con a 15763-06-1, 1-Methyladenosine
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cytokine production by rabbit alveolar macrophages: differences between activated and suppressor cell phenotypes response to)

IT 15763-06-1, 1-Methyladenosine
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cytokine production by rabbit alveolar macrophages: differences between activated and suppressor cell phenotypes response to)

RN 15763-06-1 HCAPLUS

CN Adenosine, 1-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 25 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1999:805193 HCAPLUS Full-text

DOCUMENT NUMBER: 132:131999

TITLE: Adjuvant Effect of a 14-Member Macrolide Antibiotic on DNA Vaccine

AUTHOR(S): Sato, Yukio; Shishido, Hideo; Kobayashi, Hiroko; Takeda, Junko; Irisawa, Atsushi; Miyata, Masayuki; Nishimaki, Tomoe; Fujita, Teizo; Kasukawa, Reiji

CORPORATE SOURCE: Department of Internal Medicine II, Fukushima Medical University School of Medicine, Fukushima, 960-1295,

Japan
SOURCE: Cellular Immunology (1999), 197(2), 145-150
CODEN: CLIMB8; ISSN: 0008-8749
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Macrolide antibiotics have unique immunomodulatory actions apart from their antimicrobial properties. The authors examined the effect of erythromycin (EM), a 14-member macrolide, on the immune response to a DNA vaccine that induces a T-helper-1 (Th1)-biased immune response through a Th1-promoting adjuvant effect of unmethylated CpG motifs within plasmid DNA. EM enhanced Th1 responses in plasmid DNA-immunized mice as measured by antigen-specific IgG2a antibody production, interferon-γ production by antigen-specific CD4+ T cells, and cytotoxic T lymphocyte responses. EM augmented the accessory cell activity of unmethylated CpG DNA-stimulated antigen-presenting cells (APCs), suggesting that EM enhances Th1 responses to a DNA vaccine, possibly through augmentation of accessory cell activity of APCs stimulated with CpG motifs within plasmid DNA. (c) 1999 Academic Press.
CC 1-7 (Pharmacology)
Section cross-reference(s): 15
OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 26 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1997:791743 HCAPLUS Full-text
DOCUMENT NUMBER: 128:100730
ORIGINAL REFERENCE NO.: 128:19713a,19716a
TITLE: Heterogeneity in the breakpoints in balanced rearrangements involving band 12p13 in hematologic malignancies identified by fluorescence in situ hybridization: TEL (ETV6) is involved in only one half
AUTHOR(S): Sato, Yuko; Bohlander, Stefan K.; Kobayashi, Hirofumi; Reshmi, Shalini; Suto, Yoshimasa; Davis, Elizabeth M.; Espinosa, Rafael, III; Hoopes, Richard; Montgomery, Kate T.; Kucherlapati, Raju S.; Le Beau, Michelle M.; Rowley, Janet D.
CORPORATE SOURCE: Department of Medicine, Section of Hematology/Oncology, University of Chicago, Chicago, IL, 60637-1470, USA
SOURCE: Blood (1997), 90(12), 4886-4893
CODEN: BLOOAW; ISSN: 0006-4971
PUBLISHER: W. B. Saunders Co.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Using fluorescence in situ hybridization (FISH) and probes located on 12p12.1 to 13.3, we studied the breakpoints of 23 patients who had various hematol. malignant diseases and who had 12p13-balanced translocations (21 patients), inversion (1 patient), or insertion (1 patient). Among them, 14 patients had breakpoints within YAC964c10, which contains the TEL (ETV6) gene and in 12 of these with balanced translocations or insertion, the FISH results suggested that TEL was involved. Two of the 14 patients, patients number 13 and 14, had breakpoints in YAC 964C10 that were centromeric to TEL but telomeric to KIP1. In the other 9 patients whose breakpoints did not fall within the YAC, the breakpoints were found telomeric to the YAC in at least three different locations on distal 12p. These results indicated that TEL was involved in only half (12 of 23) of the patients with balanced 12p13 rearrangements and that there probably were several other breakpoint cluster regions on 12p13, suggesting that genes other than TEL were involved in these rearrangements.
CC 14-14 (Mammalian Pathological Biochemistry)

Section cross-reference(s): 3
OS.CITING REF COUNT: 29 THERE ARE 29 CAPLUS RECORDS THAT CITE THIS RECORD (29 CITINGS)
REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 27 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1997:589901 HCAPLUS Full-text
DOCUMENT NUMBER: 127:258408
ORIGINAL REFERENCE NO.: 127:50397a,50400a
TITLE: Identification of pericentric inversion 12, inv(12)(p13.1q11), by fluorescence in situ hybridization in a patient with acute myeloid leukemia (AML-M6)
AUTHOR(S): Sato, Yuko; Bohlander, Stefan K.; Kobayashi, Hirofumi; Suto, Yoshimasa; Davis, Elizabeth M.; Espinosa, Rafael, III; Le Beau, Michelle M.; Rowley, Anet D.
CORPORATE SOURCE: Section of Hematology/Oncology, The University of Chicago, Chicago, IL, 60637, USA
SOURCE: Cancer Genetics and Cytogenetics (1997), 97(2), 157-160
CODEN: CGCYDF; ISSN: 0165-4608
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Using probes located between 12p12.1 and 12p13.3, we performed fluorescence in situ hybridization (FISH) anal. and identified an inv(12)(p13.1q11) in a patient with acute myeloid leukemia (AML-M6). Standard cytogenetic anal. had identified the rearranged chromosome 12 as del(12) (p11p13). Although deletions and translocations involving band 12p13 are fairly common chromosomal abnormalities observed in a broad spectrum of hematol. malignancies, inv(12) is a rather rare abnormality. We compare the clin. and cytogenetic findings with those of the previous cases reported in the literature.
CC 3-3 (Biochemical Genetics)
Section cross-reference(s): 14, 15
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L37 ANSWER 28 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1996:97409 HCAPLUS Full-text
DOCUMENT NUMBER: 124:131524
ORIGINAL REFERENCE NO.: 124:24187a,24190a
TITLE: Ferrite carrier for electrophotographic developer and developer containing the carrier
INVENTOR(S): Honjo, Toshio; Sato, Yuji; Kayamoto, Kanao; Kobayashi, Hiromichi; Ogata, Masahiro
PATENT ASSIGNEE(S): Powdertech Co. Ltd., Japan
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 691582	A1	19960110	EP 1995-110079	19950628 <--
EP 691582	B1	19990602		
R: DE, FR, GB, IT				
JP 08022150	A	19960123	JP 1994-174909	19940705 <--

JP 3243376 B2 20020107
US 5595850 A 19970121 US 1995-496023 19950628 <--
PRIORITY APPLN. INFO.: JP 1994-174909 A 19940705 <--
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB A ferrite carrier for electrophotog. developers which comprises a Mn-Mg ferrite having the general formula (MnO)x(MgO)y(Fe2O3)z wherein x + y + z = 100 mol% and SrO is substituted for a part of MnO, MgO and/or Fe2O3.
IC ICM G03G009-107
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

L37 ANSWER 29 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1991:570862 HCAPLUS Full-text
DOCUMENT NUMBER: 115:170862
ORIGINAL REFERENCE NO.: 115:29010h,29011a
TITLE: Electrophotographic color image formation method
INVENTOR(S): Kamitaki, Takaaki; Sato, Yoshihiro; Kobayashi, Hiroyuki; Osaki, Ichiro
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02293866	A	19901205	JP 1989-114211	19890509 <--

PRIORITY APPLN. INFO.: JP 1989-114211 19890509 <--
AB The title method uses (1) a magenta toner containing a flowability promoter and a polyester resin powder containing a xanthene dye treated with a quinacridone pigment and a phenolic resin, (2) a cyan toner containing a flowability promoter, a polyester resin powder and a Cu phthalocyanine blue pigment, (3) a yellow toner containing a flowability promoter, a polyester resin powder, and an azo yellow pigment, and (4) a black toner containing a flowability promoter and a polyester resin powder containing a carbon black. The method employs a jumping-brush process in which the color toners adhered to the developing sleeve and to the carrier surface are transferred to a photosensitive drum for a development in a full color copier.
IC ICM G03G009-09
ICS G03G013-01; G03G015-01
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

L37 ANSWER 30 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1991:594149 HCAPLUS Full-text
DOCUMENT NUMBER: 115:194149
ORIGINAL REFERENCE NO.: 115:32965a,32968a
TITLE: Electrophotographic color image formation method
INVENTOR(S): Kamitaki, Takaaki; Sato, Yoshihiro; Kobayashi, Hiroyuki; Osaki, Ichiro
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02293860	A	19901205	JP 1989-114202	19890509 <--

PRIORITY APPLN. INFO.: JP 1989-114202 19890509 <--

AB The title method uses (1) a magenta toner containing a flowability promoter and a polyester resin powder containing a xanthene dye treated with a quinacridine pigment and a phenolic resin, (2) a cyan toner containing a flowability promoter, and polyester resin powder, and a Cu phthalocyanine blue pigment, (3) a yellow toner containing a flowability promoter, a polyester resin powder, and an azo yellow pigment, (4) a black toner containing a flowability promoter, and a polyester resin powder and ≥2 pigments selected from an azo red, a Cu phthalocyanine blue and an azo yellow pigment. The method employs a jumping-brush process in which the color toners adhered to the developing sleeve and to the carrier surface are transferred to a photosensitive drum for a development in a full color copier.

IC ICM G03G009-09
ICS G03G013-01; G03G015-01

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

L37 ANSWER 31 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1991:196339 HCAPLUS Full-text
DOCUMENT NUMBER: 114:196339
ORIGINAL REFERENCE NO.: 114:32919a,32922a
TITLE: Electrostatographic color toner
INVENTOR(S): Ohsaki, Ichiro; Kohtaki, Takaaki; Sato, Yuko ; Kobayashi, Hiroyuki; Ukai, Toshiyuki
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Eur. Pat. Appl., 37 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 396086	A2	19901107	EP 1990-108237	19900430 <--
EP 396086	A3	19910410		
EP 396086	B1	19960814		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE				
JP 02291569	A	19901203	JP 1989-112229	19890502 <--
JP 2759492	B2	19980528		
JP 02294658	A	19901205	JP 1989-115004	19890510 <--
JP 2850012	B2	19990127		
AT 141419	T	19960815	AT 1990-108237	19900430 <--
US 5102761	A	19920407	US 1990-517191	19900501 <--

PRIORITY APPLN. INFO.: JP 1989-112229 A 19890502 <--
JP 1989-115004 A 19890510 <--

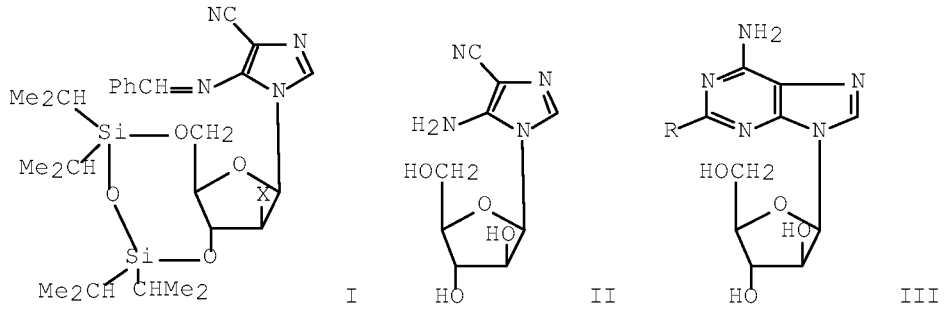
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB A color toner which is used for developing electrostatic latent images comprises a binder resin, a xanthene-type dye, and a compound containing a phenolic OH group. The color toner may further contain a quinacridone-type pigment, with the total amount of the xanthene-type dye and the quinacridone-type pigment being 1-18 weight parts/100 weight parts of the toner. The toner exhibits a clear or vivid color and has a triboelec. chargeability excellent in environmental stability. The toner is also capable of being fixed over a wide range of temperature to provide lightfast color images.

IC ICM G03G009-09
ICS G03G009-097; G03G009-087

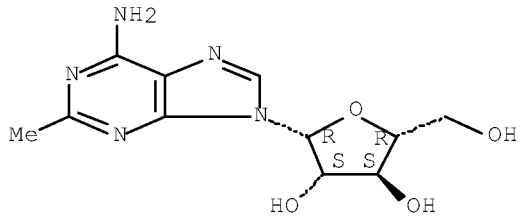
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L37 ANSWER 32 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1990:99091 HCAPLUS Full-text
DOCUMENT NUMBER: 112:99091
ORIGINAL REFERENCE NO.: 112:16871a,16874a
TITLE: Synthesis of 2-substituted adenine arabinosides and related compounds from 5-amino-4-cyano-1-(β-D-ribofuranosyl)imidazole
AUTHOR(S): Sato, Yoshiko; Maruyama, Tokumi; Honjo, Mikio
CORPORATE SOURCE: Fac. Pharm. Sci., Tokushima Bunri Univ., Tokushima, 770, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1989), 37(6), 1604-8
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 112:99091
GI



AB Triflation of the N5-benzylidene-3',5'-O-silyl protected 5-amino-4-cyano-1-(β-D-ribofuranosyl)imidazole, followed by nucleophilic displacement with OAc- and N3- provided the 2'(S)-substituted derivs. I (X = OAc, N3). Deprotection of the silyl and benzylidene groups of I (X = OAc), followed by hydrolysis of the acetyl group gave arabinoside II. Reaction of II with nitriles afforded the adenine arabinosides III (R = Me, Et, Ph, PhCH2, 2-furyl). The 2'-azido and 2'-amino analogs of III (R = Me) were similarly prepared
CC 33-9 (Carbohydrates)
IT 74317-44-5P 125338-95-6P 125338-97-8P 125339-04-0P 125339-06-2P 125339-07-3P 125339-08-4P 125339-09-5P 125339-10-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 74317-44-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 74317-44-5 HCAPLUS
CN 9H-Purin-6-amine, 9-β-D-arabinofuranosyl-2-methyl- (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L37 ANSWER 33 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1989:505640 HCAPLUS Full-text
DOCUMENT NUMBER: 111:105640
ORIGINAL REFERENCE NO.: 111:17611a,17614a
TITLE: High quality ferroelectric liquid crystal display with quasi-bookshelf layer structure
AUTHOR(S): Sato, Yuzuru; Tanaka, Takaaki; Kobayashi, Hidekazu; Aoki, Kazuo; Watanabe, Hiroshi; Takeshita, Hiroshi; Ouchi, Yukio; Takezoe, Hideo; Fukuda, Atsuo
CORPORATE SOURCE: Res. Dev. Div., Seiko Epson Corp., Suwa, 392, Japan
SOURCE: Japanese Journal of Applied Physics, Part 2: Letters (1989), 28(3), L483-L486
CODEN: JAPLD8; ISSN: 0021-4922
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A surface stabilized ferroelec. liquid crystal display with high contrast ratio and high transmittance was obtained using a conventional rubbing method. Such remarkable electrooptical properties are based on the switching between uniform states in a cell treated with an a.c. elec. field in the SmC*. The treatment caused a permanent change in the smectic layer structure from a chevron to a quasi-bookshelf structure. An example of multiplexing is also displayed.
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
OS.CITING REF COUNT: 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)

L37 ANSWER 34 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1988:31522 HCAPLUS Full-text
DOCUMENT NUMBER: 108:31522
ORIGINAL REFERENCE NO.: 108:5140h,5141a
TITLE: Rhizoxin binding to tubulin at the maytansine-binding site
AUTHOR(S): Takahashi, Masaaki; Iwasaki, Shigeo; Kobayashi, Hisayoshi; Okuda, Shigenobu; Murai, Tomoko; Sato, Yoshihiro
CORPORATE SOURCE: Inst. Appl. Microbiol., Univ. Tokyo, Tokyo, 113, Japan
SOURCE: Biochimica et Biophysica Acta, General Subjects (1987), 926(3), 215-23
CODEN: BBGSB3; ISSN: 0304-4165
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The binding of rhizoxin, a potent inhibitor of mitosis and in vitro microtubule assembly, to porcine brain tubulin was studied. Tubulin possesses 1 binding site for rhizoxin per mol. with a dissociation constant (Kd) of 1.7 + 10-7M. Ansamitocin P-3, a homolog of maytansine, was a competitive inhibitor of rhizoxin binding, with

an inhibition constant of 1.3 + 10-7M. Vinblastine also inhibited rhizoxin binding, but was not fully competitive, and the inhibition constant was 2.9 + 10-6M. In contrast, both rhizoxin and ansamitocin P-3 were potent inhibitors of vinblastine binding. Rhizoxin inhibited τ-promoted tubulin assembly, but it, differing from vinblastine, did not induce tubulin aggregation into spirals, even at a concentration as high as 2 + 10-5M. In addition, rhizoxin strongly inhibited vinblastine-induced tau-dependent tubulin aggregation. Rhizoxin binding to tubulin was completely independent from colchicine binding. These effects resemble those of maytansine. Apparently, rhizoxin binds to the maytansine-binding site and the binding sites of rhizoxin and vinblastine are not the same.

CC 1-6 (Pharmacology)

OS.CITING REF COUNT: 29 THERE ARE 29 CAPLUS RECORDS THAT CITE THIS RECORD (30 CITINGS)

L37 ANSWER 35 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1987:149051 HCAPLUS Full-text

DOCUMENT NUMBER: 106:149051

ORIGINAL REFERENCE NO.: 106:24141a,24144a

TITLE: Studies on macrocyclic lactone antibiotics. XI. Antimitotic and antitubulin activity of new antitumor antibiotics, rhizoxin and its homologs

AUTHOR(S): Takahashi, Masaaki; Iwasaki, Shigeo; Kobayashi, Hisayoshi; Okuda, Shigenobu; Murai, Tomoko; Sato, Yoshihiro; Haraguchi-Hiraoka, Tokuko; Nagano, Hiroshi

CORPORATE SOURCE: Inst. Appl. Microbiol., Univ. Tokyo, Tokyo, 113, Japan

SOURCE: Journal of Antibiotics (1987), 40(1), 66-72
CODEN: JANTAJ; ISSN: 0021-8820

DOCUMENT TYPE: Journal

LANGUAGE: English

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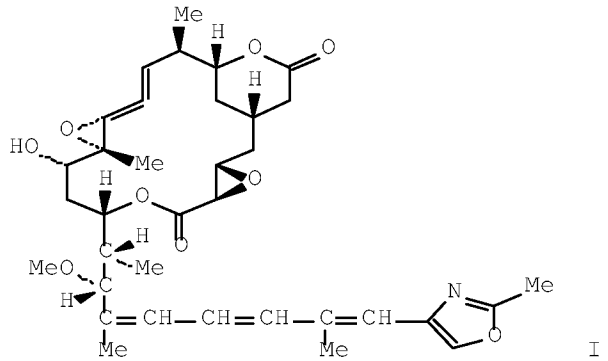

I

AB The mode of action of rhizoxin (I) [90996-54-6], a new antitumor macrolide, was investigated. Rhizoxin inhibited fusion of the male and the female pronuclei in fertilized sea urchin eggs and inhibited cilia formation in the deciliated sea urchin embryos. In vitro, polymerization of tubulin isolated from porcine brains was completely inhibited at 1 + 10-5 M concentration of rhizoxin, and tubulin which had been polymerized by incubation at 37° for 30 min was depolarized by addition of 1 + 10-5 M of the drug. Activity of rhizoxin against tubulin polymerization was compared with those of other anti-tubulin drugs such as colchicine vinblastine, and

ansamitocin P-3. Some homologues of rhizoxin also inhibited polymerization of the purified microtubule protein at almost the same extent as rhizoxin. Some structure-activity studies are reported.

CC 1-6 (Pharmacology)

OS.CITING REF COUNT: 52 THERE ARE 52 CAPLUS RECORDS THAT CITE THIS RECORD (52 CITINGS)

L37 ANSWER 36 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1987:32407 HCAPLUS Full-text

DOCUMENT NUMBER: 106:32407

ORIGINAL REFERENCE NO.: 106:5423a,5426a

TITLE: Phenylldichlorocyclopropanecarboxylic acid derivatives

INVENTOR(S): Kobayashi, Hisafumi; Kurokawa, Takashi; Kawada, Shuji; Kurozumi, Akira; Kamiya, Noriaki; Shishido, Setsuo; Sato, Yukie

PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61148138	A	19860705	JP 1984-268437	19841221 <--
JP 05044449	B	19930706		
PRIORITY APPLN. INFO.:			JP 1984-268437	19841221 <--

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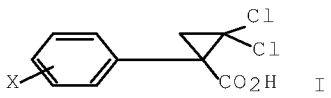


I

AB The title compds. [I; X = H, halo, alkoxy, PhCH2, (un)substituted phenoxy], useful as intermediates for insecticides, were prepared via reaction of XC6H4COMe with CHCl3 in aqueous NaOH in the presence of phase-transfer catalysts. Thus, aqueous KOH was added dropwise to a mixture of p-EtOC6H4COMe in CHCl3 and H2O containing PhCH2NEt3Cl at 10-15° over 10 h. The reaction mixture containing I (X = p-EtO), p-EtOC6H4C(:CH2)CO2H, and p-EtOC6H4CMe(OH)CO2H was diluted with CHCl3 and another portion of aqueous KOH solution was added at the same temperature in 10 h to give, after acidification, 93.1% pure I (X = p-EtO).

IC ICM C07C061-40
ICS C07C051-09; C07C051-353; C07C062-34

ICA B01J031-02; C07C057-42; C07C057-60; C07C059-48; C07C059-56; C07C059-64

CC 24-2 (Alicyclic Compounds)
Section cross-reference(s): 5

L37 ANSWER 37 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN

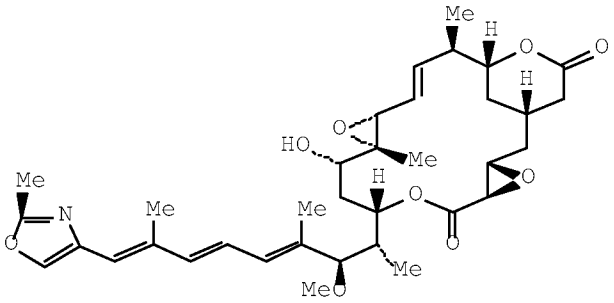
ACCESSION NUMBER: 1987:134813 HCAPLUS Full-text

DOCUMENT NUMBER: 106:134813

ORIGINAL REFERENCE NO.: 106:21923a,21926a

TITLE: Structures and activity of mitosis inhibitors,

rhizoxin and its homologues
AUTHOR(S): Iwasaki, Shigeo; Takahashi, Masaaki; Kobayashi, Hisayoshi; Namikoshi, Michio; Furukawa, Jun; Okuda, Shigenobu; Sato, Y.; Murai, T.; Sato, Z.
CORPORATE SOURCE: Inst. Appl. Microbiol., Univ. Tokyo, Japan
SOURCE: Tennen Yuki Kagobutsu Toronkai Koen Yoshishu (1986), 28th, 89-96
CODEN: TYKYDS
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
GI



I

AB Rhizoxin (I) is a novel 16-membered antifungal and antitumor macrolide isolated from Rhizopus chinensis, the pathogen of the rice seedling blight. The fungus produced also several homologs of I. Biosynthesis of I was studied, and incorporation of 1 mol serine, 12 mol acetate and 6 methionine methyls was established by feeding experiment using 13C-labeled precursors. I inhibited the mitosis of the tumor cells in a manner similar to that of vincristine and showed similar chemotherapeutic effect to those of vicristine. The mode of action of I was investigated. In vitro polymerization of microtubule proteins purified from porcine brains was completely inhibited at a 10 + 10-6M concentration of I. Activity of I against tubulin polymerization was compared with those other antitubulin drugs such as colchicine, vinblastine, and ansamitocin P-3. The homologs of I also inhibited growth of rice seedling roots and of P. oryzae similarly. Antitubulin activities of these compds. were also the same extent as I.
CC 10-1 (Microbial Biochemistry)
Section cross-reference(s): 1, 11

L37 ANSWER 38 OF 38 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1975:25663 HCAPLUS Full-text
DOCUMENT NUMBER: 82:25663
ORIGINAL REFERENCE NO.: 82:4009a,4012a
TITLE: Synthesis and hypocholesterolemic activities of eritadenine derivatives
AUTHOR(S): Okumura, Kentaro; Matsumoto, Kazuo; Fukamizu, Masaharu; Yasuo, Harunori; Taguchi, Yoshihiko; Sugihara, Yukio; Inoue, Ichizo; Seto, Masahiko; Sato, Yasuhiko; et al.
CORPORATE SOURCE: Res. Lab., Tanabe Seiyaku Co., Ltd., Toda, Japan
SOURCE: Journal of Medicinal Chemistry (1974), 17(8), 846-55
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English

GI For diagram(s), see printed CA Issue.

AB More than 100 title compds. were prepared by esterification or amidation of eritadenine (I) [23918-98-1], alkylation of adenine [73-24-5] with O-protected 2(R),3(R)-Et 4-bromo-2,3-dihydroxybutyrate [53186-35-9], or ring closure of appropriate aminocyanoimidazolylribonucleosides followed by hydrolysis and oxidation In tests in rats for hypocholesterolemic activity, esters of I with short chain alcs. were 25 to 50 times as active as I, with a minimal effective dose in diet as low as 0.1 mg/kg/day. I is about 10 times as active as clofibrate [637-07-0]. Structure-activity relations were discussed.

CC 1-3 (Pharmacodynamics)
Section cross-reference(s): 28, 33

IT 27294-73-1 28617-16-5 28987-99-7 29789-11-5 29789-14-8
33841-98-4 36200-94-9 40429-50-3 40429-57-0 40429-60-5
40429-64-9 40518-98-7 40519-04-8 40519-05-9 52589-74-9
53186-01-9 53186-02-0 53186-03-1
53186-04-2 53186-10-0 53186-11-1 53186-12-2 53186-13-3
53186-14-4 53186-15-5 53186-20-2 53186-29-1 53186-30-4
53186-31-5
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anticholesteremic activity of)

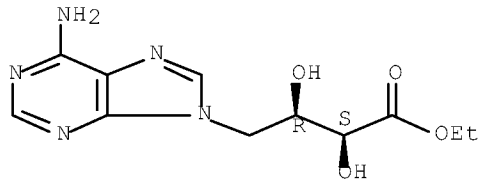
IT 25616-63-1P 25616-64-2P 25616-66-4P 28875-85-6P 28875-87-8P
28875-88-9P 28987-90-8P 28987-93-1P
28987-94-2P 28991-53-9P 28991-59-5P 29031-30-9P
33147-28-3P 33303-42-3P 33303-44-5P 35813-24-2P 35813-25-3P
35813-26-4P 35813-27-5P 35813-28-6P 36745-91-2P 36755-70-1P
37063-30-2P 37063-31-3P 37797-69-6P 38067-38-8P 38430-98-7P
38787-75-6P 38787-76-7P 38787-80-3P 38787-84-7P 38790-55-5P
38790-56-6P 38790-57-7P 38790-58-8P 38937-34-7P 40062-58-6P
40062-59-7P 41355-09-3P 41355-10-6P 52589-73-8P 52972-08-4P
52972-09-5P 52972-10-8P 52972-11-9P 52972-12-0P 53182-48-2P
53185-79-8P 53185-80-1P 53185-81-2P 53185-82-3P 53185-83-4P
53185-84-5P 53185-85-6P 53185-86-7P 53185-87-8P 53185-88-9P
53185-89-0P 53185-90-3P 53185-91-4P 53185-92-5P 53185-93-6P
53185-94-7P 53185-95-8P 53185-96-9P 53185-97-0P 53185-98-1P
53185-99-2P 53186-00-8P 53186-05-3P 53186-06-4P 53186-07-5P
53186-09-7P 53186-16-6P 53186-17-7P 53186-18-8P 53186-19-9P
53186-21-3P 53186-22-4P 53186-23-5P 53186-24-6P 53186-25-7P
53186-26-8P 53186-27-9P 53186-28-0P 53188-39-9P 53188-40-2P
53188-41-3P 53188-42-4P 53188-43-5P 53188-44-6P 53199-53-4P
53199-54-5P 53503-08-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and anticholesteremic activity of)

IT 53186-01-9 53186-02-0 53186-04-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anticholesteremic activity of)

RN 53186-01-9 HCAPLUS

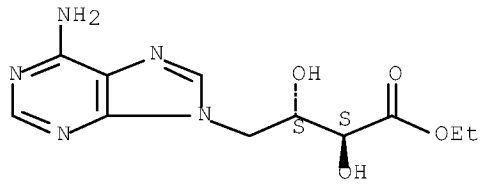
CN 9H-Purine-9-butanoic acid, 6-amino-α,β-dihydroxy-, ethyl ester, [S-(R*,S*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



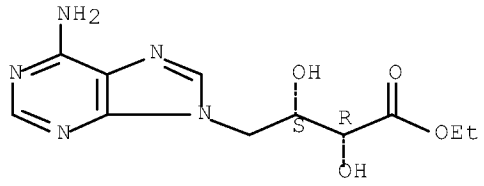
RN 53186-02-0 HCAPLUS
CN 9H-Purine-9-butanoic acid, 6-amino-α,β-dihydroxy-, ethyl ester, (αS,βS)- (CA INDEX NAME)

Absolute stereochemistry.



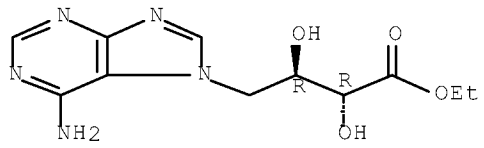
RN 53186-04-2 HCAPLUS
CN 9H-Purine-9-butanoic acid, 6-amino-α,β-dihydroxy-, ethyl ester, [R-(R*,S*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 28875-88-9P 28987-93-1P 28987-94-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and anticholesteremic activity of)
RN 28875-88-9 HCAPLUS
CN 7H-Purine-7-butanoic acid, 6-amino-α,β-dihydroxy-, ethyl ester, [R-(R*,R*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 28987-93-1 HCAPLUS
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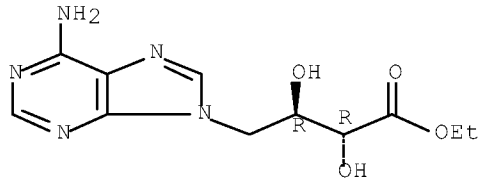
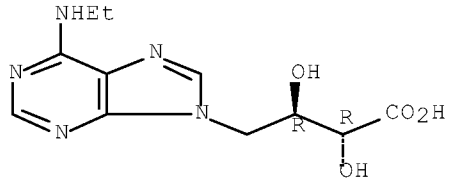
Absolute stereochemistry.



RN 28987-94-2 HCAPLUS
CN 9H-Purine-9-butanoic acid, 6-(ethylamino)-α,β-dihydroxy-, [R-(R*,R*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

SEARCH HISTORY

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     FILE 'HCAPLUS' ENTERED AT 13:29:58 ON 20 APR 2010
                E US2005-179798/APPS
L1             1 SEA SPE=ON  ABB=ON  PLU=ON  US2005-179798/APPS
                D SCAN
                SEL RN

     FILE 'REGISTRY' ENTERED AT 13:30:43 ON 20 APR 2010
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                OR 139639-23-9/BI OR 147841-68-7/BI OR 155357-37-2/BI OR
                168417-72-9/BI OR 206906-04-9/BI OR 372487-09-7/BI OR 485815-63
                -2/BI OR 586482-03-3/BI OR 586485-90-7/BI OR 586485-91-8/BI OR
                586485-92-9/BI OR 586485-93-0/BI OR 586485-94-1/BI OR 586487-44
                -7/BI OR 586487-45-8/BI OR 586487-46-9/BI OR 586487-47-0/BI OR
                586487-48-1/BI OR 586487-49-2/BI OR 586487-50-5/BI OR 586487-51
                -6/BI OR 586487-52-7/BI OR 586487-53-8/BI OR 586487-54-9/BI OR
                586487-55-0/BI OR 586487-56-1/BI OR 586487-57-2/BI OR 586487-58
                -3/BI OR 586487-59-4/BI OR 7440-57-5/BI)
                E 2(W)DEOXY(W)6(W)O(W)METHYL(W)GUANOSINE/CN
                E 2-DEOXY-6-O-METHYL GUANOSINE/CN
                E "GUANOSINE, 2'-DEOXY-6-O-METHYL"/CN
L3             1 SEA SPE=ON  ABB=ON  PLU=ON  "GUANOSINE, 2'-DEOXY-6-O-METHYL-"/C
                N
                D SCAN
                D IDE CAN
L4             0 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND L3
                E 9H-PURINE, 2-AMINO-9-(2-DEOXY-B-D-ERYTHRO-PENTOFURANOSYL
L5             1 SEA SPE=ON  ABB=ON  PLU=ON  "9H-PURINE, 2-AMINO-9-(2-DEOXY-.BET
                A.-D-ERYTHRO-PENTOFURANOSYL)-6-METHOXY-"/CN
                D SCAN
                D IDE CAN
                E "9H-PURINE, 2-AMINO-9-(2-DEOXY-B-D-RIBOFURANOSYL)-6-METH
L6             1 SEA SPE=ON  ABB=ON  PLU=ON  "9H-PURINE, 2-AMINO-9-(2-DEOXY-.BET
                A.-D-RIBOFURANOSYL)-6-METHOXY-"/CN
                D SCAN
                E "2-AMINO-6-METHOXY-9-(2-DEOXY-B-D-ERYTHRO-PENTOFURANOSYL
L7             1 SEA SPE=ON  ABB=ON  PLU=ON  "2-AMINO-6-METHOXY-9-(2-DEOXY-.BETA
                .-D-ERYTHRO-PENTOFURANOSYL)PURINE"/CN
                D SCAN
                E "2'-DEOXY-6-METHYLGUANOSINE"/CN
L8             1 SEA SPE=ON  ABB=ON  PLU=ON  "2'-DEOXY-6-METHYLGUANOSINE"/CN
                D SCAN
                E "6-O-METHYL-2'-DEOXYGUANOSINE"/CN
L9             1 SEA SPE=ON  ABB=ON  PLU=ON  "6-O-METHYL-2'-DEOXYGUANOSINE"/CN
                D SCAN
                E "6-O-METHYLDEOXYGUANOSINE"/CN
L10            1 SEA SPE=ON  ABB=ON  PLU=ON  "6-O-METHYLDEOXYGUANOSINE"/CN
                D SCAN
                E "O6-METHYL-2'-DEOXYGUANOSINE"/CN
L11            1 SEA SPE=ON  ABB=ON  PLU=ON  "O6-METHYL-2'-DEOXYGUANOSINE"/CN
                D SCAN
                E "O6-METHYLDEOXYGUANOSINE"/CN
L12            1 SEA SPE=ON  ABB=ON  PLU=ON  "O6-METHYLDEOXYGUANOSINE"/CN
                D SCAN
                E "O6-ME-DG"/CN
L13            0 SEA SPE=ON  ABB=ON  PLU=ON  "O6-ME-DG"/CN
                E "O6-MEDGUO"/CN
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L14           0 SEA SPE=ON  ABB=ON  PLU=ON  "O6-MEDGUO"/CN
L15           0 SEA SPE=ON  ABB=ON  PLU=ON  "O6-MEDG"/CN
                E C11H15N5O4/MF
L16         535 SEA SPE=ON  ABB=ON  PLU=ON  C11H15N5O4/MF
L17           0 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND L16

     FILE 'HCAPLUS' ENTERED AT 14:24:10 ON 20 APR 2010
                E O6-METHYLDEOXYGUANOSINE/CT
                E E3+ALL
                E METHYLDEOXYGUANOSINE/CT
                E DEOXYGUANOSINE/CT
                E E3+ALL

     FILE 'REGISTRY' ENTERED AT 14:27:32 ON 20 APR 2010
L18         535 SEA SPE=ON  ABB=ON  PLU=ON  L3 OR (L5 OR L6 OR L7 OR L8 OR L9
                OR L10 OR L11 OR L12) OR L16
L19         535 SEA SPE=ON  ABB=ON  PLU=ON  L16 OR L18

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L20        1993 SEA SPE=ON  ABB=ON  PLU=ON  L19
                E IMMUNOSTIMULATORY
                E IMMUNOSTIMULATORY/CT
                E E3+ALL
                E IMMUNOSTIMULATE/CT
                E IMMUNOSTIMULATION/CT
                E E3+ALL
L21        3194 SEA SPE=ON  ABB=ON  PLU=ON  IMMUNOSTIMULATION+PFT/CT OR
                (IMMUNOSTIMUL?/BI OR IMMUNO(W)STIMUL?)/BI
L22           3 SEA SPE=ON  ABB=ON  PLU=ON  L20 AND L21
                D SCAN
                E ANTISENSE/CT
                E E3+ALL
L23       53933 SEA SPE=ON  ABB=ON  PLU=ON  (ANTISENS? OR ANTI(W)SENS?)/BI
L24          18 SEA SPE=ON  ABB=ON  PLU=ON  L20 AND L23
                E OLIGONUCLEOTIDES/CT
                E E3+ALL
L25      151460 SEA SPE=ON  ABB=ON  PLU=ON  OLIGONUCLEOTIDES+OLD,NT,PFT/CT OR
                (OLIGONUCLEOTIDE? OR OLIGO(W)NUCLEOTIDE?)/BI
L26         156 SEA SPE=ON  ABB=ON  PLU=ON  L20 AND L25
L27          41 SEA SPE=ON  ABB=ON  PLU=ON  L20(L)L25
                E CPG/CT
                E E3+ALL
L28       17731 SEA SPE=ON  ABB=ON  PLU=ON  (CPG OR C(W)P(W)G)/BI
L29           3 SEA SPE=ON  ABB=ON  PLU=ON  L20 AND L28
L30       16956 SEA SPE=ON  ABB=ON  PLU=ON  SATO Y?/AU
L31       15574 SEA SPE=ON  ABB=ON  PLU=ON  KOBAYASHI H?/AU
L32           3 SEA SPE=ON  ABB=ON  PLU=ON  L20 AND (L30 OR L31)
L33          59 SEA SPE=ON  ABB=ON  PLU=ON  L30 AND L31
L34          35 SEA SPE=ON  ABB=ON  PLU=ON  L33 AND (PRY<=2003 OR AY<=2003 OR
                PY<=2003 OR PD<=2003)
L35          31 SEA SPE=ON  ABB=ON  PLU=ON  L27 AND (PRY<=2003 OR AY<=2003 OR
                PY<=2003 OR PD<=2003)
L36           0 SEA SPE=ON  ABB=ON  PLU=ON  (L22 OR L24 OR L29 OR L35) AND
                (L30 OR L31)

     FILE 'HCAPLUS' ENTERED AT 16:37:58 ON 20 APR 2010
                D STAT QUE L22
                D L22 IBIB ABS HITIND HITSTR 1-3
                D STAT QUE L24
                D L24 IBIB ABS HITIND HITSTR 1-18
                D STAT QUE L29
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                D STAT QUE L35
                D L35 IBIB ABS HITIND HITSTR 1-31

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                D STAT QUE L34
L37          38 DUP REMOVE L32 L34 (0 DUPLICATES REMOVED)
                     ANSWERS '1-38' FROM FILE HCAPLUS
                D L37 IBIB ABS HITIND HITSTR 1-38

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